PROCEEDINGS

of the

WORLD ASSEMBLY

of the

World Council
for the Welfare of the Blind

October 8-17, 1969

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WORLD ASSEMBLY

of the

World Council
for the Welfare of the Blind

held at

Vigyan Bhavan, New Delhi, India

October 8-17, 1969

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WORLD COUNCIL FOR THE WELFARE OF THE BLIND

ORGANISATION MONDIALE POUR LA PROMOTION SOCIALE DES AVEUGLES

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Certain of the papers included in these Proceedings were originally delivered in languages other than English and, while every care has been taken to ensure accuracy in translation, it is possible that some variations from the original structure and sense may have occured. Furthermore, certain papers prepared in the English language were delivered by speakers not entirely familiar with that language. Some editing has therefore been required. Our apologies are submitted for any inaccuracies that may have resulted therefrom. Due to lack of space, it has been necessary also in some cases to abridge the addresses. We feel sure that the speakers will appreciate the need for these slight editorial changes.

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Mrs Mary G. Patterson, President, Canadian Council of the Blind
Mr John E. Jarvis

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BACKGROUND OF THE CONFERENCE

The World Council for the Welfare of the Blind grew out of a Resolution adopted by the International Conference of Workers for the Blind held in Oxford, England, in 1949. An Interim Committee was set up under the Chairmanship of Mr. W. McG. Eagar (United Kingdom), known as the International Committee for the Welfare of the Blind, which was responsible for drawing up a draft constitution and for the registration of the future organisation. Only eight countries were represented in the International Committee, but at the Constituent Assembly held in Paris in July 1951, other countries came into membership, and the first Assembly in Paris in 1954 included representatives of thirty-four nations. Committees were set up to deal with specialised aspects of work for the blind, and two autonomous bodies, the World Braille Council and the International Conference of Educators of Blind Youth, subsequently became affiliated with the W.C.W.B. as consultative committees on Braille and Education.

In 1951, Colonel E. A. Baker of Canada, became the first President of W.C.W.B., and was re-elected to this office by the two subsequent World Assemblies in 1954 and 1959. Under his chairmanship, an Executive Committee of twenty-five members was responsible for the Council's general policies. The day-to-day administration remains in the hands of the Council's officers, and is carried out by the Secretary-General. The Executive Committee meets every two and a half years to consider reports from the Consultative and Standing Committees and from the officers, and to make decisions at policy level. The President, Vice-Presidents, Secretary-General, Treasurer, and all other members of the Executive Committee are elected by the World Assembly, which includes all honorary, international, representative and associate members of the Council. Fifty-four countries are represented in the General Assembly at the present time. The Assembly meets every five years. New elections are held immediately following each Assembly.

At the opening of this, our Fourth Quinquennial Assembly, the composition of the Executive Committee is as follows :—

President : Mr Eric T. Boulter

Vice-Presidents : Mr Hideyuki Iwahashi (Japan) ; Mrs Dorina de Guovea Nowill (Brazil) ; Mr Stevan Uzelac (Yugoslavia).

Secretary-General : Mr John E. Jarvis.

Treasurer : Mon H. Amblard (France).

Individuals serving on the national delegations of the following countries represent their geographical areas :

EUROPE : Finland, France, German Federal Republic, Italy, Spain, United Kingdom, Yugoslavia.

SOUTH AND EAST ASIA: Ceylon, India, Japan, Malaysia, Pakistan.

SOUTH AMERICA : Brazil, Colombia.

MIDDLE EAST : Jordan.

OCEANIA : New Zealand.

AFRICA : Ethiopia, Nigeria, Tunisia.

NORTH AND CENTRAL AMERICA : Canada, Guatemala, U.S.A.

The Chairmen of the consultative committees also have seats on the Executive, and there are three seats "At Large" held by individually elected members.

The World Council has been granted consultative status in Category 'B' with the Economic and Social Council of the United Nations, with UNESCO, UNICEF, and with the International Labour Organisation, and enjoys a close relationship with the World Health Organisation and other international groups. It is a member of the Council of World Organisations interested in the Handicapped, of the Union of International Associations and of the International Council on Social Welfare, and has gained widespread recognition as the only responsible world organisation covering all aspects of blindness and its prevention.

The Council has sponsored or participated in a number of important international conferences, in addition to its own World Assemblies and Committee Meetings. An International Conference on Braille Music Notation took place in Paris in 1954, under the sponsorship of W.C.W.B., UNESCO and the American Foundation for Overseas Blind. This led to the publication of an International Manual on Braille Music Notation, and to further negotiations with a view to reaching World uniformity in this field. A Pan-American Conference on the Welfare of the Blind and Prevention of Blindness was held in Sao Paulo in 1954. A European Seminar on the Rehabilitation of the Blind, held in London in 1956, was jointly sponsored by the World Council for the Welfare of the Blind, and the World Veterans' Federation, and further Conferences were held in Tokyo (Far East Conference on Work for the Blind) in 1957, in New York (International Congress of Technology and Blindness) in 1962, and in Kuala Lumpur (Second Asian Conference on Work for the Blind) in May 1963. The Council has also been represented at a number of other international meetings in the fields of Social Work and of general rehabilitation.

Meetings of the World Assembly were held in Paris (1954), Rome (1959) and New York (1964). Meetings of the Executive Committee have been held in Paris (1951) ; Bussum, Netherlands (1952) ; Como, Italy (1953) ; Paris (1954) ; London (1956) ; Colombo (1958) ; Hanover (1962) and Belgrade (1967).

There have also been meetings of the two Consultative Committees. I.C.E.B.Y's Conferences have been convened in 1952 (Bussum, Netherlands) ; 1957 (Oslo) ; 1962 (Hanover) and 1967 (Boston). The other eight committees have held a number of meetings during the Council's existence.

As a result of concerted action by the World Health Organisation, the World Council for the Welfare of the Blind and the International Association for the Prevention of Blindness, 1962 was declared PREVENTION OF BLINDNESS YEAR and April 7th that year PREVENTION OF BLINDNESS DAY. The occasion led to considerable publicity, and as a result new eye banks were created, chairs endowed at universities for purposes of ophthalmological research, etc. National magazines for the blind issued special numbers, and many articles on this subject appeared in the world's press, focusing general attention on this grave problem.

In 1956, it was decided that the W.C.W.B. should undertake responsibility for the upkeep and development of the home and birthplace of Louis Braille, as an international shrine and museum. It has received wide publicity, and generous donations have been received from a number of countries for support of this project. Blind persons from all over the world call at Coupvray to visit the Museum.

An International Exhibition of Technical Devices, Aids and Games for the Blind has been established at the Paris Headquarters of the World Council, in co-operation with the American Foundation for Overseas Blind.

An International Catalogue of Braille Music, and the Revised International Manual of Braille Music Notation have been published under the auspices of the World Braille Council, the former being undertaken by the A.F.O.B. at the request of the Braille Music Conference. Other useful printed reports or leaflets have been distributed by the W.C.W.B.'s Standing Committees, among them four I.C.E.B.Y. Reports, a Manual on Communication with Deaf-Blind Persons, a leaflet on the Employment of the Blind and a leaflet on the Louis Braille Museum. A complete catalogue of technical aids and appliances has been published jointly by the American Foundation for the Blind and the Royal National Institute for the Blind, with the official endorsement of the World Council. The Proceedings of World Assemblies, and the reports of the various committees are made available to all members.

The World Council publishes a bi-annual newsletter, designed to act as a link between its members. It has a wide circulation, and is also made available to many international governmental and non-governmental organisations, and other groups interested in our field. It aims at keeping members informed of all changes in the administration or leadership of organisations of and for the blind the world over, of new legislation concerning the blind, of special projects or achievements in work for the blind, of future plans, meetings, conferences, etc. It also reports on past conferences, and reviews books and publications of special interest to the blind. The newsletter is produced in English, French and Spanish.

As far as possible, all documentation emanating from the Council's offices is published in both English and French.

The W.C.W.B. has given a wide distribution to certain documents published by the International Labour Organisation, dealing with special provisions for the blind on the legal obligation to employ the disabled. An International Catalogue of films about the blind, and some short monographs on specific aspects of work for the blind, have also been prepared and circulated by the Council.

A list of those persons in membership at the time of the World Assembly, and the names of members elected to the Executive Committee to serve for the next five-year period will be found at the end of these Proceedings. Names of elected Chairmen of the Consultative and Standing Committees of W.C.W.B. are also listed.

January, 1970.

MESSAGE FROM THE PRESIDENT

"The Blind in an Age of Science" was the theme of the Fourth General Assembly of the W.C.W.B. in New Delhi. We certainly live in an age of science, with all its opportunities and all its risks. The progress of our society is ruled by science to an increasing extent, and this results in rapid changes in the labour market, in education, in social conditions, etc., in fact, changes in the entire society. In such progress there is a risk that especially large gaps will open up between the majority of the population and the small minorities. On the other hand, we are being offered opportunities which we have never had before. Science in itself is neutral, and it offers the same possibilities to everyone with the ability and the means of using them. Science can, therefore, serve the blind as much as the sighted—if we were only able to take advantage of these possibilities. The difficulty lies mainly in the fact that we are a small group, and thus we often lack the resources necessary to make science our servant.

Again, science is also international. Research findings are based on internationally recognized methods, and such findings are rapidly disseminated to the entire world. This increases our possibilities of utilizing science also for the needs of the blind. However, this requires international co-operation and international co-ordination of resources. International co-operation is hence possibly even more important in our field than to the sighted. All organized work, however, calls for some instrument, a channel, and I believe that our World Council could serve as such a channel, if all the more than 50 countries now holding full membership of the organisation would realize the opportunities offered by our work—but also the risk that we all run if we do not take advantage of them.

The now published Proceedings of the Fourth General Assembly contain a number of very valuable reports and surveys. They might be considered both as a diagnosis of the present situation, and as a prognosis for our possibilities in the future. I, therefore, emphatically urge everyone interested to study these documents carefully.

Three of the leading personalities in our international work notified the General Assembly in New Delhi that they wished to leave their posts on the W.C.W.B. i.e., the President Mr Eric T. Boulter ; the Secretary-General, Mr John Jarvis ; and the Treasurer, Mon Henri Amblard. Thanks to their energetic, devoted and self-sacrificing work, the W.C.W.B. has grown into the respected and effective instrument of which we are in such great need today. The best way we have of showing our appreciation and gratitude for their achievements is to try to improve our efforts even more during the years to come.

At the General Assembly in New Delhi, the undeserved honour was bestowed on me of being elected President of the W.C.W.B. for the next five-year period. I do feel that it was a great honour to be chosen, but still, I would not have accepted the appointment, if I had not been certain that I could count on confident and effective cooperation from leading personalities in the field of blind welfare in so many countries.

The tasks ahead of us are so immense that we have no chance of succeeding, unless we co-operate efficiently. The motto for the five years to come must, therefore, be to concentrate our efforts towards the attainment of a practical form of co-operation, not only within our own organisation, but also with various international and national organisations outside our own circle, with the United Nations and their agencies, with national governments, etc. We must find the means of increasing our resources, with the aim of improving the administration of the W.C.W.B. and also of giving the various standing committees and regional committees a real opportunity to accomplish the work they very much wish to do, but which they so far have had no resources for. We can succeed in this work, and we must succeed. Five years is a long period in a rapidly changing society, and it may prove impossible later to regain what we have missed out on during that time.

CHARLES HEDKVIST
President

March 24, 1970

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Capt H. J. M. Desai
Mr John E. Jarvis
Dr E. J. Waterhouse

Local Arrangements Committee

Mrs Queenie H. C. Captain—Chairman
Mr Suresh C. Ahuja—Joint Secretary
Miss N. K. Ajgaonkar
Capt H. J. M. Desai
Dr (Mrs) Durgabai Deshmukh
Mrs R. S. Fazelbhoy
Mrs P. D. Khambatta
Dr H. N. Kunzru
Lt G. L. Nardekar
Dr Rajendra T. Vyas—Joint Secretary
Mrs Y. K. Wadia

Reception Committee

Dr (Mrs) Durgabai Deshmukh—Chairman
Mrs Indrani Devi Jagjivan Ram—Vice Chairman
Dr Sushila Nayar— Vice Chairman
Dr L. P. Agarwal— Vice Chairman
Mr Lal Advani—Liaison
Mr D. R. Bery—Finance
Dr (Miss) Durga Deulkar—Souvenir
Mrs Pramila Gadgil—Hospitality
Mr D. R. Mankekar—Publicity
Mrs Dipali Nag—Entertainment
Mrs Sheela Nayak—Exhibition
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INAUGURAL SESSION

Wednesday morning, October 8, 1969.

Chairman : **Mrs Queenie H. C. Captain,** *President,*
National Association for the Blind, India

WELCOME AND GREETINGS FROM THE NATIONAL ASSOCIATION FOR THE BLIND, INDIA

By **Mrs Queenie H. C. Captain**

Madam Prime Minister, Mr Boulter, Ladies and Gentlemen :

It gives me very great pleasure indeed to welcome you all and especially our Prime Minister, on behalf of the National Association for the Blind. This is a unique occasion in that representatives of about fifty countries, from all over the world, are here today for this World Council meeting, and it gives us great joy to know that you have all come here with one thought and one mind, and that is the welfare of the blind and the handicapped.

We have a very distinguished gathering here this morning, and it is a great honour for the National Association for the Blind. This is a red letter day in the history of our young association which is only seventeen years old. Mrs Durgabai Deshmukh celebrated the silver jubilee of the Delhi B.R.A., that is the Blind Relief Association, yesterday. Prior to the establishment of the National Association for the Blind in India, in January 1952, there were institutions for the blind all over the country doing very valuable work ; but, since the inauguration of the National Association for the Blind, which is one body consisting of all the institutions in India, we are naturally stronger and can do more and better work for our blind sisters and brothers.

It may surprise you to know that it is estimated that there are five million blind people in India. Most of them are scattered in rural areas, but we are reaching them somehow ; and in the world's blind population I am told that there are about fifteen to sixteen million blind persons. That means that every third or fourth person in that fifteen or sixteen million is an Indian. It is shocking to have to say this—it's tragic—but we are doing our best to use the latest methods and to help people as much as we can. Not so much with money, but by rehabilitating them, by training them, and then by sending them out to earn their own living, and so to be useful and happy citizens of this vast country. We have now about 800 blind people going out to work in mills and factories in Bombay, and in Delhi, and in other big cities. Very happily they find their way—miles and miles away ; some go by train, some go by bus, and some walk ; and they are getting the same wages as the sighted people in those mills and factories—not out of pity but because we send them trained personnel—we test them out and make sure that they will be a good example for other people who want jobs. And I am very happy and proud to be able to tell you that their employers remark very very creditably on their work. In fact some of them say that their output and work is higher than that of the sighted.

Now this is a very big agricultural country as you know, and most of our blind people are in the rural areas. Therefore, when we were established in 1952, we first took a survey of the country : we had no money, we had no office, we did not even have a chair of our own, but we were helped by many kind friends and we had faith, and courage, and confidence that if God wanted this bit of work to succeed He would send the means, and believe me, He has sent us more than we ever expected. Now, being an agricultural country, our first pilot project was a farm for blind farmers at Phansa in Gujarat, and this became possible through the generosity of the Sir Dorab Tata Trust who gave us Rs. 200,000 with which to buy this farm. Then we started, and the Royal Commonwealth Society for the Blind very generously sent us an agricultural expert to show us how to do things, and we have had tremendous help from the American Foundation for Overseas Blind, from the V.R.A. Department of the United States Government, and from other countries ; and I would like to take this opportunity to express our gratitude to all those friends of ours abroad who have helped us with lakhs and lakhs of rupees, especially the gentleman on my left, Mr Eric Boulter, President of the World Council for the Welfare of the Blind. So we are now beginning to stand on our feet, but the initial help was from the Sir Dorab Tata Trust and because they helped us to buy the land and gave us such money—which was a very vast sum for us—out of courtesy and to perpetuate our deep appreciation and gratitude to the Tata Trust, we named that farm TACEB : i.e., the Tata Agricultural and Rural Training Centre for the Blind, and it is now known by that name, TACEB. That farm has progressed and progressed. It is only about 100 miles from Bombay. Do go in and see it, and you will be surprised. I am told by the Chairman of the TACEB Committee that 50% of the blind farmers who are trained there go back to their villages, and are happy, useful members of the community in which they live. And, if any of them are not welcomed home again, or have nowhere to go, then we have a certain sum of money laid aside by which we buy them a little plot of land, and then they farm on their own. That is our first project, and that was started in January 1960.

Then things began to move. We felt we must now have a Workshop for the Blind. That project actually started in 1950, before the National Association for the Blind was established. There were several enthusiasts in Bombay who said : "Let us get together and raise funds and have a Workshop for the Blind in Bombay," and let me tell you friends the response was slow, but very good, and our own Government actually gave us permission to have a race day on which we collected Rs. 3 lakhs, *i.e.*, Rs. 300,000 at that race meeting. That took us thirteen years to accomplish. We worked and worked—while other jobs of work were going on, we worked and worked at the Workshop, and after thirteen years we have the pride and happiness of having a Workshop for the Blind in Bombay at Worli opened, and that is now a most flourishing concern.

We call it a dream come true, and we have had many dreams and many ambitions come true, and today is another dream come true in that the World Council has met here, and we feel that we have much to show these guests who have come from abroad, and we have still much more to learn from them. We do ask you all if you are in any place, especially in Delhi and Bombay, where progressive work is going on, to visit our institutions ; you do not need any invitation, just come in at any time between 8 o'clock in the morning, and 5 o'clock in the evening, and there will be someone to greet you and show you round.

Now our Prime Minister has honoured us very greatly by being present with us today. She has many engagements, as you know, and she says she cannot spend very much time with us, though she has graciously consented to stay as long as she possibly dare. But, before she goes, I would like to repeat a few words said by our late beloved Prime Minister, Pandit Jawaharlal Nehru—I heard him say this in Delhi and I heard him say it again in Bombay : "India has now passed the bullock-cart stage ; we may call this the bicycle stage ; and we shall very soon be in the motor-car stage." And I venture to say, with all sincerity, Madam, that that Prime Minister's illustrious daughter is now propelling us into the jet age. When we received instructions about how Mr Boulter and his committee would like us to arrange this conference here in India, and we got the theme of the Conference : "The Blind in an Age of Science," we were rather staggered and we thought : "What can we offer at this conference ?" Then some of us sat down—we had many many meetings, we have been working on this, friends, for nearly two years—and when we thought, we had a stock-taking, we did some deep thinking, we felt we could accept the challenge, and therefore you may be amused, but we approached the Government Departments here, the Department of Communications, and requested them to permit us to have a slogan typed and stamped on all letters that went out during this week. So when you receive your mail, do look at the letter carefully and our slogan was "Blindness—ability, not disability," because we have proved our blind people worthy of every bit of what we tried to do for them, and when we do a little for them they do ten times as much.

So we can trust our blind people—not only our men—women are entering the field too now, and going to work, but our little children. We have many projects all over the country. There is a talking book studio, which is quite a progressive one, where books, especially text books, are taped for college students ; we have a dictaphone service ; we have an employment service because it is no good training people and then giving them nothing to do. The right to work is the right of the blind man as much as that of the sighted and our great ambition is once they are trained and we feel that they are fit, well they have got to go out and they have got to earn, and they are happy to do that. Many of us do not like to pay taxes, but our blind people want to be tax-payers, and they look forward to the day when they will be able to pay taxes. Now I know our Honourable Prime Minister has many engagements so I will cut short my speech, but I will thank Mr Eric Boulter and the World Council for having confidence in us, and for you all for coming from all the continents in the world to be present here today. We are deeply grateful to you, we shall learn all we can, and I hope this Conference will be a very great success and a very happy one, and that all our guests will go home with happy memories of their visit to India. I thank you all once again for doing us the honour of coming and we are deeply grateful Madam, for your presence today, and that of our Ministers and other distinguished guests, and I can say very sincerely and humbly : May God bless you all ! Jai Hind !

MESSAGE FROM MR RICHARD NIXON

President of the United States of America

Mrs Captain : Now we have had the honour of receiving a special message from President Nixon, and there are many messages, but we would like to read Mr Nixon's message first, because we would like our Prime Minister to hear it before she goes. Mr Stone, would you read the message, please.

Mr Stone : Madam Prime Minister, Mrs Captain, Mr Boulter, Ladies and Gentlemen :

I have the honour to bring you this message from the President of the United States of America :

"My greetings and good wishes to the participants in the General Assembly of the World Council for the Welfare of the Blind as you gather in New Delhi. Such meetings as this are vital links in the chain of international communication and co-operation as man and nations join to seek constructive solutions to common problems. Among the most pressing of these problems is finding a way to help the disabled and disadvantaged to participate fully and productively in our society. Federal efforts for the rehabilitation of the blind in the United States began in 1920 ; our Government has been helping to provide books and other materials for the education of the blind ever since 1879, but today we are more acutely aware than ever of the need for continued assistance in this area, for never has it been as important as now to marshal the fullness of our talents towards the fulfilment of the goals we share. The courage, determination, and ability of the blind to become useful citizens and partners in progress are truly admirable. Perhaps none has better proved or symbolised these qualities than Helen Keller. As I said earlier this year when I proclaimed the week of June 1st as Helen Keller Memorial Week she 'became an American Ambassador at large to the world because she was unexcelled in interpreting the nation's philosophy of respect for the unique inherent qualities of each individual.' The World Council for the Welfare of the Blind has perpetuated the philosophy of Helen Keller, and enriched her legacy to humanity. You have gone out as she did with confidence and compassion to seek the assistance of all men and women of good will to achieve a mutual co-operation in advancing the life's work of this great American lady. May you have a most successful and productive meeting.

Richard Nixon."

INAUGURAL ADDRESS

by Mrs. Indira Gandhi
Prime Minister of India

Mrs Captain We are so happy you are here this week when we are all celebrating the birth centenary of the Father of our Nation, Mahatma Gandhi. He dedicated his life to the welfare and uplift of the underprivileged and he taught us all to do the same. I will now request our Prime Minister to make her speech and to inaugurate the conference.

Mrs Gandhi

Mrs Captain, Mr Boulter, distinguished guests from abroad and from India :

It gives me very great pleasure to be here with you this morning, because it is always a privilege to be with those who work for the betterment of society. Mrs Captain has told you something of the problems of the blind and what the associations here have been able to do. You know that ours is a vast country, and every problem therefore becomes a vast problem, and although much work has begun in many directions we are very conscious that it is only the beginning and that we have barely touched the fringe of the question.

We have so much still to do here for all sections of the people, and blindness is a part of that very big problem of helping our people not only to lead a better life, but to be able to contribute their talents and their capability for the development of the nation. It is not only a question—a human problem—but it is also a question, as we just heard in President Nixon's message, of harnessing all our human resources, which are the most valuable of the resources which any country can produce. Your theme of "Blindness in an Age of Science" is very appropriate for our times, because science has given us so much new knowledge in the field of medicine as well as in other fields, and we have to see how it can be best utilised to help our fellow men. In India it is not only a question of the prevention of blindness, or the cure, but of creating the right social outlook; perhaps all countries have been through this phase, but here the saddest part of all is the attitude towards any handicap, whether it is blindness, or some other handicap, and it is unless society treats the problems not with pity but with deep understanding and sensitivity that we can really be successful in helping our brothers and sisters.

As far as the handicapped are concerned each one of us has some handicap or another, some handicaps are more obvious, and others are not; but each one of us has to face our own individual personal handicaps, and life itself is always a challenge. Of course for those whose handicap is obvious it is a greater challenge. But we know and all of you, I am sure, know, that the greater the challenge the more the inner resources a person has to meet the challenge, and we have seen this in countless cases. We heard mention of Helen Keller a little while ago. She came to India some years ago and she came to dinner at our house. She arrived just a little bit earlier than we had expected, so I raced down the steps to receive her as she got out of the car, and before her companion Polly Thompson could introduce her, she had put her hands to my face and said "You do not have to introduce her, I know this is Indira," and she knew, she said, because she had read my father's letters to me and she had visualised what sort of a person I was; and I was quite amazed to see afterwards when she spoke more on the subject that she had not said this just as a thing to say, but she did know a great deal about me—not the details of my life but the sort of person I was. We talked about this. I think I can say without hesitation that I have met few people who had got to know me so well without really having met me at all, I mean without having met me or even heard of me. And this was a part of her very great understanding of all aspects of the world in which we live. She not only understood people, but she had a feeling for animals and for all parts of nature. Just to meet her was a source of great inspiration. Her very life, of course, the manner in which she overcame her difficulties, was nothing short of a miracle; but we know now that given the determination, and given knowledge and help, all human beings are capable of such miracles. And this is what gives us hope for the future.

Many of us have sight: that is we have two eyes which can see people, things, colours, but I do not know if we have the insight or the deep understanding which many of our so-called sightless friends have, and perhaps in dealing with this question and other questions of social welfare and human understanding it is this inner insight which is so necessary. We live in an age of science, but we have not always used this science for a deeper understanding. We have far better communications: we rush from country to country, but the very pace of movement does not give us the time to wait, to try and see deeply, or to understand. Perhaps this is where we have gone wrong and we have not been able to solve many problems which are capable of solution. It is this need for a deeper understanding of the problems, the difficulties and needs of different people—they may be people in our own country, they may be handicapped people or they may have the handicap of being in a minority or of being of different religions, or some other type of handicap, or they may be people from other lands. Today the most necessary things for us to have are the capacity to see with the heart and to understand these problems with our heart. This is the only way to deal with these problems on a more long-term basis.

Of course the Government has a great deal to do, and Mr Menon, our Minister who is in charge of Social Welfare, will speak about this later on.

In India we have all the problems which you have, but many more besides, because apart from the lack of money, the lack of equipment, we have to face tremendous ignorance and superstition in dealing with blindness or indeed of illness of any kind. Some years ago when my mother died, Mahatma Gandhi thought that we should open a hospital in her name because she had been greatly concerned with health, and especially with the health of women. So we opened a women's hospital on the edge of the city so that it could serve the rural population. (Of course this was some years ago). But even then for several months we did not have a single patient. The rural women just did not see why they should come to hospital, and it needed much effort on the part of the doctors and the nurses going from village to village, from lane to lane, before they could persuade any person to come. Of course that situation is very largely changed, and people do flock to hospitals, but nevertheless there are large sections of the people even today who look at all these problems not from the scientific point of view, not with a point of view that here is a problem which can be solved with the knowledge already available to mankind, but as some kind of part of their fate. Much of disease is preventable, and I think that we have to do much more work in trying to prevent disease because much of our blindness does come from smallpox and other such diseases—sometimes also from lack of cleanliness. It is a question of education not only for those who work for the blind, but of general education in every village, in every slum, so that from their earliest childhood people are aware of the dangers and the pitfalls and learn to avoid them. In this way only can this problem be solved on the mass scale on which we face it here, and I know that all of you have great experience in this work, and I am sure that your coming here will not only throw light on new aspects of how to deal with this problem, and how to get the best from our blind friends, but it will be of tremendous inspiration and help to the different associations of the blind here, and those who are engaged in this very vital and necessary work for society as a whole.

I would like to welcome you all and say how glad I am that you did choose Delhi for the venue of our Conference; I hope that you will have the opportunity of knowing something of our country, the tremendous difficulties which we face, and the manner in which we are facing them and solving them. My experience of life has been that as soon as you solve one aspect of a problem another problem rises in its place. Life is one series of problems and mankind has to face these problems with courage, with determination, and with the will to succeed. I know that social workers certainly in our country, and I am sure in the countries from which you come, do have this determination and the will to succeed and that is how they have been able to face tremendous odds and yet have progressed step by step in their work. I should like to take this opportunity of giving my good wishes to those in India who have been working for the blind and those who have come from the other countries who are engaged in this very valuable work. May your work progress from success to success, and may it help in harnessing the very great talents and capabilities which do not always come to light, which are possessed by our blind friends, so that they can also contribute to the moulding of society, and taking our lives forward to a better world, not only a world where there is greater physical comfort, but a world in which there is a greater understanding of our fellow men, and in which we can all live and work together in peace.

I now declare this Conference open.

RESPONSE

by Mr Eric T. Boulter, President, World Council for the Welfare of the Blind

Mr Boulter : Madam Chairman, Madam Prime Minister, Your Excellencies, distinguished members of the diplomatic corps, honoured guests, members of the World Council for the Welfare of the Blind, ladies and gentlemen:

Madam Prime Minister, it has been most gracious of you to join us at this inaugural session; we know that you have a very full calendar today and we are truly grateful to you for having already spent so much time with us. Therefore I shall make my reply brief, but I beg you not to use its brevity as a yardstick of our sincerity, or our deep gratitude to you, and to the many other distinguished Indians who have made it possible for us to be here today. It is a little more than twenty years ago since the resolution was adopted at the Conference at Oxford in England that constituted the Interim Commission that two years later brought into being the World Council for the Welfare of the Blind. I had the honour to be named the Secretary-General of that interim commission and I have continued to be honoured by holding an officership of the World Council throughout the whole period since then. But in that whole twenty year period there is nothing I think has given me greater pleasure than this opportunity that the World Council for the Welfare of the Blind's World Assembly should meet for the first time in Asia, and in this magnificent capital of the great Republic of India. Let me assure you, Madam Prime Minister, and all our Indian friends that it is a source of real pleasure to every member of the World Council for the Welfare of the Blind that we can meet in this great land.

The presence on this podium, and in this hall, of so many distinguished members of Government, distinguished leaders of the community, communities across India, shows the extent to which India is endeavouring to meet the gigantic problem of blindness and its prevention, and their presence with us here is indicative of their intention to use every effort to further strengthen the magnificent bonds that have already been established between India and its colleagues in other countries of the world which are faced with similar problems and similar desires to overcome the problems of blindness, and to arrange for its prevention to the greatest possible degree. The National Association for the Blind, India, came into formal being within just a few months of the World Council for the Welfare of the Blind, but almost immediately that new young national body here in this country recognised the value that could be derived from international co-operation, and almost immediately—even probably during that period, Mrs Captain, when it did not own a chair or table—even during that period the National Association for the Blind became a full member of the World Council for the Welfare of the Blind, and our Council has gained tremendous strength from the services that have been rendered to it by its Indian friends. The late R. M. Alpaiwalla was proudly elected by us to be a Vice-President of the Council, and he filled that office for several years before his sad death. His successor as President of the National Association for the Blind, Mrs Queenie Captain, has been absolutely unstinting in her support of the World Council and she has, I know, received great support in this in turn from her own honorary officers and staff members, and the many volunteers who are connected with the work of the National Association for the Blind. I must particularly mention Captain H. J. M. Desai and Lieutenant Nardekar, and Mr Suresh Ahuja and Dr Rajendra Vyas, all of whom have attended many of the meetings of the World Council, have filled many important committee offices, and have discharged them all magnificently. So you see, the World Council for the Welfare of the Blind is greatly indebted to India. We note with great pleasure the joining of hands that has occurred here in Delhi; I know this is not a new thing, that hands were joined on many other occasions, but on this occasion the joining of hands between the National Association for the Blind and its President Queenie Captain, and the Blind Relief Association here in New Delhi, headed by its dynamic President Dr (Mrs.) Durgabai Deshmukh—this team, supported by the many committee members who have helped to arrange this whole occasion, has been a very happy circumstance for us, and has allowed us to receive an unstinted welcome: the hospitality that has already been accorded to us here has been magnificent, and it is truly appreciated by all of us.

We meet as you know under the theme: "The Blind in an Age of Science." We shall not endeavour to reveal at this time the contents of the many papers that will be read during the course of the next ten days, nor to try to forecast the discussions that will occur after the presentation of those papers, but I think it may be said that we, the blind, and those who work with the blind, are here not merely to see what we can gain from the new developments of science—although that of course is an important thing—but also what we as blind people can further contribute to this scientific age. In recent years there has been developed for example, a quite new breed of blind employee known as a computer programmer. A year or two ago we almost did not know what computers were, now blind people throughout the world are playing a very important role in computer programming and so themselves contributing to the furtherance of science, because computers are used so widely in that field. So it is our hope that science may be harnessed both to prevent blindness, to control blindness, to cure blindness and to open up new prospects of employment for the blind, to allow the blind to further contribute to the lives of their own communities, and this is the object of all blind people. And so, in this opportunity you have provided us to meet in New Delhi, you, our friends from India, are making a great contribution to the future, to the present and future well-being of the blind people all around the world by allowing us to discuss these very important topics under the general theme of "The Blind in an Age of Science," here in New Delhi.

To all of you who have contributed to make this day and the next ten days possible, to you, Madam Prime Minister, for your kindness in gracing this head table inaugural session, please accept the warm and everlasting thanks of every member of the World Council for the Welfare of the Blind. Thank you.

GREETINGS FROM THE GOVERNMENT OF INDIA

by Mr P. Govinda Menon,

Union Minister for Law & Social Welfare, Government of India, New Delhi,

Mr Menon : Mrs Captain, Mr Boulter, distinguished delegates from countries the world over, ladies and gentlemen:

After the Prime Minister's speech, words of welcome and greetings from me on behalf of the Government of India, are really redundant, but still as the Minister in the Union Government in charge of the welfare of the handicapped including the blind, I think it will not be inappropriate if I give expression to a few words of welcome to the distinguished members assembled here; and therefore with great pleasure I welcome you all to this memorable assembly on behalf of the Government of India.

Many of you have travelled very long distances to come here and discuss in depth the major theme of the conference: "The Blind in an Age of Science." The theme must be most aptly chosen, because of the profound influence which science and technology have had on the life of each one of us. The impact of science and technology on the life of the blind is even greater. One of the limitations of blindness is that it restricts the range and variety of experiences of individuals. Science and technology have brought forward many a device which helps the blind person to overcome his limitations. A cursory glance at some of the papers to be read in this Assembly indicates a wide range of new devices likely to be developed in the next few years.

These devices may well provide the blind direct access to the printed word and help him to move in a crowded street unaided. The developments of these devices which now appear on the threshold will give an entirely new dimension to work for the blind. More thrilling is perhaps the prospect that visual imagery may be produced even when the eye is not functioning. Should this happen, blindness will cease to be the scourge which it is at present.

As you are probably aware the Government of India are very keenly interested in the rehabilitation of the blind. It was at India's suggestion that nearly twenty years ago, UNESCO undertook the evolution of a World Braille Code, which has greatly facilitated the education of the blind. In a sense the World Braille Code was the forerunner of the new devices that now appear as a silver lining on the horizon. Again on going through some of the papers I find that the estimate of the blind population in the world is about 25 million. A fifth of this population resides in India. Unfortunately our services do not extend to more than 2% of that population. This underlines the importance of taking urgent measures to accelerate the pace of progress in this field of human endeavour.

The Government of India has in the past twenty years or so taken certain measures; as a token of their interest, they have set up a comprehensive National Centre for the Blind at Dehra Dun. Some of you will have an opportunity of seeing the appliances and materials made at this Centre. I have no doubt that the galaxy of experts gathered here from practically every corner of the world will be able to offer us advice on the manner in which we should proceed to provide services to our blind population in the shortest possible time and at the lowest possible cost. Such advice will be welcome particularly because my department is primarily responsible for promoting the rehabilitation of the blind. Since the problem of blindness, not only in India but in other parts of the world, is so great, collaboration between the State and Voluntary Organisations is of the greatest importance. I need hardly assure you that the recommendations of this Council, which is an international association of voluntary organisations, will receive the most careful consideration of my department. Let me, in conclusion, welcome you once again to the Capital of India. I do hope that your brief stay in this city will be both pleasurable and profitable.

I wish you and the Assembly every success.

MESSAGES

Mr Jarvis Madam Chairman, Your Excellencies, Distinguished Guests, delegates, official participants, observers, ladies and gentlemen, friends and colleagues here present:

I am going to read to you a selection only of the messages which have reached us from all parts of the world, because if I were to read all of them, we should be not only here for the remainder of this session but probably for the rest of the second morning session as well.

His Excellency Major-General Gowon, Head of the Federal Military Government, and Commander-in-Chief of the Armed Forces of the Federal Republic of Nigeria.

"On this occasion of the Fourth General Assembly in Delhi of the World Council for the Welfare of the Blind, I hereby extend to your esteemed organisation the most cordial greetings of the Government and people of the Federal Republic of Nigeria. We in Nigeria are acutely conscious of the fact that the progress and development of any country cannot be regarded as complete if the welfare of the blind and other handicapped members of the community is neglected. In this respect the nations of the world owe a great debt of gratitude to your Council for its relentless crusade in making society the world over realise that the blind, in spite of their handicap, can still play a useful role in the social and economic life of the community in which they live.

"Although your task has not been an easy one, your impressive achievements in this field of social action should serve as a source of inspiration and encouragement to your members who have dedicated their lives to the service of the less fortunate members of the human race. I would like to assure your Council that the Government and people of the Federal Republic of Nigeria take a special interest in your activities, and that the rehabilitation and protection of the blind and other disabled persons is regarded as a matter of the utmost priority. With this assurance I wish your Council a very successful deliberation, and fruitful conclusions at this Assembly. Yours sincerely, Gowon."

The Hon. John Gorton, Prime Minister of Australia:

"The World Council for the Welfare of the Blind has undertaken a major task in organising this Assembly to discuss the problems of the blind. On behalf of the Government and people of Australia I send greetings and good wishes on the occasion of the Council's Fourth General Assembly. John Gorton, Prime Minister."

Mr A. E. Kinsella, Minister of Education, New Zealand:

"I am indeed very pleased to have the opportunity of sending a message, on my own behalf and on behalf of the Government of New Zealand, to the World Council Quinquennial Conference. We in New Zealand have long recognised the fact that blindness and its associated problems can be overcome (in so far as such a physical handicap can be overcome) only when the best educational facilities are provided. With these facilities and with the necessary interest, stimulation, and determination, the blind person can be given a chance of learning to support himself, contribute to his community, and to do away with the distasteful idea that he is living off the charity of others. Because the visually handicapped has social needs different from sighted people they require not an education borrowed from the sighted and modified to allow for their deficiencies, but an education at all levels that is designed to meet their needs and to prepare them for a full and harmonious life. In New Zealand we try to keep up with new developments in the best methods of educating the blind, and of helping them to overcome their handicap. In several centres we provide classes and resource centres for the blind and partially blind; Homai College, the only residential school for the blind in this country, offers the opportunity of providing for the special educational needs of blind children, and also serves as a resource centre in which teacher preparation, classroom skills and activities, the assessment and development of each child, may be carried on. The College's Deaf-Blind unit is proving its worth and attempting to help the deaf-blind child towards more independence and expression of self. Our country feels honoured that for the past fifteen years the representative of the Executive of the World Council of Australia, New Zealand, and the South Pacific, has been a New Zealander, Mr E. W. Christiansen. In this way we have a sense of participation in your invaluable work. May I take this opportunity of wishing you every success in your conference and in your work this year and in the years to come. A. E. Kinsella."

Don Camilo Alonso Vega, Minister of the Interior of the Spanish Government:

"Dear Mr President, in view of the nearness of the meeting in New Delhi under your own presidency, of the World Council for the Welfare of the Blind, with the purpose of studying and considering the problems affecting the sightless all over the world, I hereby send to you, in my capacity of President of the Higher Council of the Blind in Spain, and also as a Minister of the Spanish Government, my best wishes and very warm greetings to you, which I ask you to extend to all members who are delegates, observers and members of this council. The Spanish National Organisation for the Blind is looking eagerly to the strengthening of all the links of friendship and brotherhood that unites the institutions participating in the Conference of which you are President, and our delegates are leaving for India with a wish that their collaboration may be useful in all the work of the Assembly. With my highest consideration I am at the entire disposal of your Excellency." Signed by the Minister of the Interior, Camilo Alonso Vega.

The Right Honourable Barbara Castle, Member of Parliament, First Secretary of State, and Secretary of State for Employment and Productivity in the United Kingdom:

"I would very much like to convey the very best wishes of the United Kingdom Government to your Council and your General Assembly. My Department, the Department of Employment and Productivity, is directly concerned with the training and resettlement of the blind, and I am very happy to tell you that the close co-operation which exists in the United Kingdom between central and local government and voluntary organisations is providing more opportunities for blind people in an ever-widening variety of jobs in industry, commerce and the professions. I hope your discussions over the next two weeks will open up more and better opportunities for blind people, throughout the world, to lead a useful and satisfactory life. Signed Barbara Castle."

We have received, Madam President, messages of good wishes from all members of our Executive Committee who are not able to be present with us in New Delhi, and from these I have chosen to read two. **Mrs Elisa M. de Stahl, President of the National Committee for the Blind of Guatemala.** "Regretting deeply inability to be present. Please accept heartiest good wishes executive session and World Assembly. Elisa M. de Stahl."

Mr M. Rajhi, President of the National Union of the Blind of Tunisia:

"Disastrous floods have devastated Tunisia. The Tunisian delegation prevented from participating in the World Council for the Welfare of the Blind deeply regret their inability to attend. On the occasion of the opening the Blind of Tunisia send fraternal greetings and wish you success in the work of the Congress. Rajhi."

Mr Spychalski, President of the Polish Union of the Blind:

"Please accept our warm greetings and best wishes for fruitful debates on the occasion of the General Assembly of the World Council for the Welfare of the Blind. Spychalski."

Lord Head, Chairman of the Royal National Institute for the Blind of the United Kingdom:

"It is a particular pleasure for me, as Chairman of the Royal National Institute for the Blind of Great Britain, to extend on behalf of our organisation, the most cordial greetings to all delegates and every good wish for the success of this General Assembly in New Delhi. The Royal National Institute for the Blind is proud to have been associated with the origins of the

World Council, stemming as it does from the 1949 conference of the workers for the blind in Oxford, which was jointly organised by the Institute and the American Foundation for Overseas Blind. The current theme: 'The Blind in an Age of Science' is one in which the United Kingdom in general, and the Royal National Institute for the Blind in particular, is deeply interested. For the task to which we have dedicated ourselves, in the second century of our existence upon which we are now embarked, is to take the fullest advantage of the modern scientific and technological revolution, both for the welfare of the blind and as a means of wider opportunity for their employment. As a voluntary organisation collaborating with national and local government authorities in the provision of services to Britain's blind, we have always sought to ensure that our own pioneer and experimental work can be developed to the state where it may eventually be adopted by the statutory authorities as part of a fully integrated welfare system. I am sure that your present deliberations will lead to a useful exchange of knowledge in all fields of work for the blind, which is bound to be of benefit to blind people all over the world. Lord Head."

Sri Shivananjappah, Honorary General Secretary of the Mysore Welfare Association for the Blind, Bangalore, India:

"Wish and hope the Conference takes far-reaching decisions on legislation for employment of the blind in State and private sectors, and for education and training at State and Central levels. M. Shivananjappah."

Miss S. Watkinson in South Africa, written on behalf of the Coloured and Indian Blind Welfare Association of the Transvaal, South Africa:

"May we send our very best wishes for a fruitful and valuable conference to the World Council for the Welfare of the Blind. We pray God to guide all those whose decisions will influence the welfare of the blind, of the partially-sighted and of the deaf-blind in every country. Shirley Watkinson."

GREETINGS AND THANKS FROM THE RECEPTION COMMITTEE

By **Dr (Mrs) Durgabai Deshmukh,** *Chairman, Reception Committee and President, Blind Relief Association, New Delhi.*

Madam Chairman, Mr Boulter and friends:

It gives me great pleasure in conveying to all of you, particularly the distinguished delegates to this assembly from nearly 40 countries our greetings, on behalf of the Reception Committee, which was constituted to make all the necessary arrangements for holding this assembly in New Delhi. When Mrs Queenie Captain, President of the National Association for the Blind invited the World Council for the Welfare of the Blind to hold their Fourth General Assembly in India, she took a great step forward in bringing all those who work for the blind, and the blind themselves, and others, to India, not only to hold their Assembly session here but also to see what is being done in India for the blind both by Government and non-government organisations. This invitation was extended by her when she attended the previous General Assembly, and it was gracious of the World Council to accept. The National Association for the Blind would like to have held the session in Bombay where they have been functioning for several years, but it was felt that Delhi would be a more suitable venue as it provides opportunities for the Prime Minister and various Government organisations to participate. Then she requested the Blind Relief Association of which I have the honour to be the President, to help the National Association for the Blind to make the arrangements necessary for this purpose.

Although we celebrated our Silver Jubilee yesterday, from the point of view of experience, knowledge and ability, we are still a very young organisation, and I hesitated a while whether we should take the responsibility, but I was encouraged by so many people in Delhi to accept that ultimately we decided to constitute a reception committee. I am pleased to say that over 250 members from Delhi representing industry and business, as well as voluntary organisations such as the Rotary and Lions Clubs, the Central Social Welfare Board Delhi, and the School of Social Work, as also the Rashtriya Virja Nand Andh Kanya Vidyalaya, and other institutions for the blind in Delhi, have come forward. I therefore consider it my duty as President of the Reception Committee, and on behalf of Smt Indrani Devi Jagjivan Ram, Vice-President, and members of the Reception Committee to offer our very cordial greetings to all the distinguished persons who are present today. For the task of organising the Conference we constituted several committees to take up different aspects of the work. I am grateful to Mrs Premilabai Gadgil who is the Chairman of the Hospitality Committee, and I am sure that she and her devoted band of volunteers will give their services to the comfort and convenience of our distinguished delegates.

I thank Dr Miss Durga Deulkar who was responsible for the Silver Jubilee souvenir which you have all seen. Then I would like to thank Mrs Dipali Nag who is in charge of entertainments; she has made very good arrangements both for the Paul Doyon Piano Recital tomorrow, and the cultural programme the day after. I am so happy to see news about Paul Doyon in all the papers today. I must also thank Mrs Sheela Nayak, Chairman of the Exhibition Committee and her helpers, not only volunteers, but also artists from various parts of Delhi who came and helped her to set up this exhibition. Some of you have been able to see the Exhibition briefly, many of you have not seen it in detail and we hope you will find time for this. I would also like to thank our Finance Chairman, Mr. Bery and the Chairman of the Transport Committee Mr O. N. Talwar and all who have helped shoulder these responsibilities. I must also thank Mrs S. Sachdev, Chairman of our Refreshment Committee and all the other enthusiastic volunteers who have helped to make the arrangements. We have been working for the past eight months and we know there may be deficiencies but we have done our best. Then I would like to thank the Delhi Administration for all its support and help in making the necessary arrangements. The Department of Social Welfare headed by Mr Govinda Menon has also come forward with a grant of Rs. 35,000 towards our expenditure. Of the many others who have helped I would particularly like to mention Mr Lal Advani who is our friend and guide, and our constant supporter, also Mr Mankekar, the Editor of the Times of India who is the chairman of our Publicity Committee, who has unfortunately had to leave Delhi at the last minute and has entrusted his work to Mr Dharmarajan. Our thanks are due also to All-India Radio, Television and all the other organisations and people who have done so much and given us every help.

I would like to conclude by offering our most cordial greetings to you all. Please forgive us for any deficiencies. You only have to ask us to get whatever comfort you would like to have, and we are trying to do our best.

And finally I would like to express our thanks to the World Council and its President Mr Boulter, for having agreed to Mrs Captain's request to hold this assembly in India and also to Mrs Captain for having entrusted the responsibility to us.

THANK YOU.

IN MEMORIAM

Wednesday morning, October 8, 1969

Dr Helen Keller and Colonel Edwin A. Baker

Chairman: **Mr Eric T. Boulter,** *President, World Council for the Welfare of the Blind.*

Mr Boulter We have reassembled here now for a short moment to pay homage to two great friends of all who are blind, and all who work with the blind; two very great friends of the World Council for the Welfare of the Blind: Helen Keller was most active in the organisation of the Oxford Conference which gave birth to the World Council for the Welfare of the Blind, and she became our first Honorary Life Member at the very moment that the Council came into legal being. Colonel E. A. Baker was our beloved Founder President.

We are all saddened by their deaths, but we rejoice in the glory of their lives. Each of them was a great citizen of a great country; each of them gave example and help to blind people; and each of them was an outstanding citizen of the world. We consider it appropriate therefore this morning to ask one or two people to talk briefly about them—first of all the official representatives of the countries from which they came, then two blind and deaf-blind people from the countries from which they came, and then our Secretary-General on behalf of the whole world, will take note of some of the things they said and wrote. The first of the messages this morning will be given to us by Mr Gaylord N. Stone of the United States Embassy who is here representing His Excellency John Kenneth Keating, the Ambassador of the United States, who was a personal friend of Helen Keller, who knew her well, and who has some reminiscences to give us.

Mr Stone Thank you very much, Mr Boulter. Ambassador Keating was very sorry not to be here with you today in person. As many of you know, he is back in the United States preparing for bilateral talks between our Government and the Government of India that will take place next week. He prepared this speech for this occasion, and I will now be delivering it on his behalf:

"Twice during my lifetime I met Helen Keller; although these meetings were too brief, they left a deep impression upon me. For Helen Keller, once met, was not a person who fades easily into distant memory. The Greeks have a phrase for genius 'when one is given the gift it is said that they have been touched by the sacred fire,' so it was with Helen Keller, but even more so she moved all those who came into contact with her. Although an American by birth, the flame of Helen Keller's genius reached to all parts of the world. She became a symbol of humanity's unquenchable will.

For more than half a century Helen Keller was a beacon to the handicapped world. It can be said that millions of people, simply because Helen Keller lived the life she did, accomplished far more than they might have. Her inspiration was by no means limited to the English-speaking peoples, her books have been translated into more than fifty languages including a number spoken on this sub-continent. In fact Helen Keller, at the age of 75, an age when many of us have lost the thirst for life, made a lengthy journey to India. In 1955 she decided to see for herself this fascinating land and, as was her desire, to work in her chosen field here. For nine weeks she travelled about India, and left in her way a light that is still remembered by those whose paths she crossed.

It is appropriate on the 100th anniversary of the birth of Mahatma Gandhi, to recall one of the first things Helen Keller did on arrival in India. She went to Rajghat to visit the Samadhi of Mahatma Gandhi and there in its quiet eloquence she prayed alone. Later friends asked her what she said. Helen Keller told them that his belief would remain alive till the world is filled, as she put it, with the essence of peace and brotherhood. As best as I can learn Helen Keller never met Mahatma Gandhi. Nevertheless they were linked closely in the idealism and courage they shared. Both in their own way faced mountainous obstacles which surely would throw back lesser persons.

During her stay in India Miss Keller took time out to visit the Taj Mahal. Her impressions of that cathedral of beauty helped reflect the person she was. She saw with her fingers far more than many of us who are gifted with sight see with our eyes. In a letter to Jawaharlal Nehru she said of her experience: "My fingers were touched as if by flames as I flashed my hands over the walls. I was deeply touched by the grief which the Taj embodies, but at the heart of it I felt the surging life of the generations that have gone by, and I had a prophetic sense of the vigorous men and women that are still to be born."

Such was Helen Keller: a dreamer, a poet, a humanist, a unique person in a world that gives us far too few Helen Kellers. On June 1st last year Helen Keller died, and of all the tributes I can recall, the one which stands out in my mind came from a colleague of mine, Senator Lister Hill, whose home was not far from Helen Keller's birthplace in the American State of Alabama. 'Helen Keller,' Senator Hill said, 'will live on, one of the few, the immortal names not born to die. Her spirit will endure as long as man can read and stories can be told, of the woman who showed the world there are no boundaries to courage and to faith."

Mr Boulter Thank you, Mr Stone, and I do hope you will express our appreciation to Ambassador Keating for his wonderful message.

Colonel Baker was an outstanding citizen of Canada. We are honoured today to have His Excellency, Mr James George, the High Commissioner for Canada in India to give us his recollections and his government's reminiscences of the man who was for so many years our own friend and leader. Mr George.

Mr George I am sure Colonel E. A. Baker would have been very touched, as I am, by the way your World Assembly is remembering him this morning. He would be particularly pleased to have his name linked with that of Helen Keller in your remembrance. Working on the same continent, and in the same field, he greatly admired Helen Keller, and was delighted to receive from her, shortly after her 80th birthday in 1960, the first Keller award for Distinguished Service for the Blind. Many of you here knew Colonel Baker much better than I did, but we were his neighbours in Toronto years ago and I grew up with his three boys.

I remember the sort of relationship that he had with his family, and with so many of all ages who flowed through that house. I realise, only now, to what extent relationships depend on the eyes, and what a miracle it was for him not to feel cut off from other people, but to know them and to respond to them without seeing. In spite of his handicap we all felt included in his presence, and that is a great thing and the quality of a great man. Whether his greatness was partly the result of his own personal struggle with his affliction and of his unending tireless service for the whole international brotherhood of the blind, I do not know. But his life's work must certainly have formed him.

His idea of service was always simple, and never self-interested. He had a practical no-nonsense compassion that was unsentimental, but intensely human, He knew how to help others face what he had overcome. Perhaps, like Helen Keller, his most important contribution was his own positive attitude: the way he gave hope to others with the same handicap, and won acceptance for the blinded in the community of *employed* persons. It was not only rehabilitation, physical and psychological, that concerned him, it was, especially in his later years, the prevention of blindness that dominated his life. As his work became more international, he stressed increasingly the need to find those suffering from eye diseases that would result in blindness if not properly treated in time.

This was above all his message for the Canadian National Institute for the Blind of which he was a Founder and Managing Director for 42 years, for the Royal Commonwealth Society for the Blind in which he was a moving spirit, and for this World Assembly over which he presided at its first three sessions—that is for a period of fifteen years. So it is fitting that we at this Assembly remember him today with simplicity and with gratitude.

Mr Boulter Thank you very much indeed, Mr George. Helen Keller has had many admirers, and one often hears reference to Helen Keller's disciples. I think that among those who can be most closely identified as Helen Keller's disciples are those who, like she, are deaf and blind. We were delighted to welcome—for some personal reminiscences of the impact that Helen Keller's life has had on his own life—Dr Richard Kinney, the Executive Vice-President of the Hadley School for the Blind in Winnetka, Illinois, United States of America. Dr Kinney.

Dr Kinney Friends of the World Council, I cannot think of the quiet passing to rest of Helen Keller in her 87th year as other than the culmination of a truly happy life, magnificently lived. Writer, lecturer, philosopher, humanitarian, she demonstrated as has no other human being that to know is more important than to see, that to understand is more vital than to hear. Once, as a very young man I first became acquainted with Helen Keller when I sent her Christmas greetings over the signature: "One who owes you much." Miss Keller replied in a hand-written braille note: "I cannot imagine what you owe me, but certainly my joy on the blessed day was sweetened by your message." What did I owe her? Proof that the mind transcends the senses; example that teaches more eloquently than a thousand orations. Practical help given in manifold ways through the many causes and organisations she championed because Helen Keller was not satisfied merely to attain the foothills of knowledge, but pressed on to panoramic heights.

I myself was heartened to continue my education. The very scholarship that enabled me to complete my university studies was created in her honour. Throughout the whole fabric of my life and work runs a golden thread of inspiration from her words, her deeds, and yet I am but one of many who owe much, so very much, to this woman who saw with her mind and heard with her heart. During the past half century in America every significant advance in the welfare of deaf-blind persons has been linked inextricably with her influence. This very year, as if in tribute to her passing, the Government of the United States has assumed new responsibilities for the education of deaf-blind children and the training of deaf-blind adults. Helen Keller spoke for the blind who are deaf; yes, and for the blind who can hear. She spoke in truth for all human beings everywhere who aspire to achieve their full potential in order that they may serve others. Did a word need saying, she said it. Did a deed need doing, she did it. The causes she championed lived on in her words, may our deeds live on in our own.

Mr Boulter Thank you very much indeed Mr Richard Kinney; and now Mrs Mary G. Patterson, the President of the Canadian Council for the Blind, and one who was very close to Colonel Baker through much of his working life, will give us her reminiscences.

Mrs Patterson "Greater love hath no man than this that a man lay down his life for his friends." Although those words were spoken many years ago they are most appropriate as we remember the life of the one to whom we are paying tribute today. Losing his vision while serving his country overseas in World War I, Colonel Edwin Albert Baker returned to Canada determined to assist in the promotion and well-being of blind people.

He was one of the founders of, and Managing Director of, the Canadian National Institute for the Blind until his retirement. He played a very important role in the establishing of the World Council for the Welfare of the Blind, and served as its first President for many years. His great love and his deep concern not only for blind Canadians, but for blind people throughout the world, will long be remembered. In the early 1940's when the blind people of Canada felt that there was a need of an organisation through which they could have a voice in their own affairs, Colonel Baker was invited to attend the formation meeting of what is now known as the Canadian Council for the Blind. He declined the invitation simply because he felt the blind people themselves should meet for free discussions and that they should formulate the plans for the setting-up of their own council. However, he and his organisation were willing in any way to be of assistance to us when we formed what we felt was the type of organisation that we required.

My personal acquaintance with Colonel Baker greatly encouraged me to be of service to blind people and before you today, representing my blind colleagues in Canada, I am very proud of the fact that at this Fourth General Assembly of the World Council for the Welfare of the Blind, time was set aside in order that we could pay our respects to a great Canadian and world leader, Colonel Edwin Albert Baker. He was a great friend for so many years to all of us, and as we think of his life, and his life of service, may we, as blind people around the world, remember that he set a firm foundation and helped to set a firm foundation for the work of the blind around the world, and may we continue to work diligently to fulfil the purpose which he helped to establish. Lest we forget!

Mr Boulter Thank you very much, Mrs Patterson. The lives of these two great people have been, and will continue to be, an inspiration to all of us. All of us have strong personal memories of them and of the things they said and did. Fortunately both of them also left a written record of their thoughts, and the Secretary-General of the World Council for the Welfare of the Blind, Mr John Jarvis, will now read a short selection of some of the writings of Helen Keller and Colonel Baker.

Mr Jarvis On returning home to his parents' farm in Canada, only a few months after losing his sight in the First World War, Colonel Baker said: "Look here, Dad, I am not going to sit around doing nothing, not with the war on, and the harvest to get in, and you with no help; let me try milking—just give me a pail; I will hear the ping of the milk into it. Remember, it's something I've done before, Dad, often. What did I tell you Dad? You ought to recognise a stubborn Baker when you begat one."

To his first employer, after his rehabilitation at St. Dunstan's, Colonel Baker said: "If I did not think I was earning my pay, I would fire myself at the end of the month. I do not want anything soft, Sir." On another occasion he said, "I never liked to fight people; they get angry and when they get angry they do not reason. As a general principle I have endeavoured throughout my life to avoid hurting the feelings of anyone."

After the first meeting of the Executive of this Council he said: "We cannot get the whole apple at once. We have to get it *growing.* Plant the roots, and develop the tree."

Helen Keller said to Colonel Baker when presenting him with the Megel Medal at the American Foundation for the Blind in New York: "It is good to give the unfortunate a living; it is better to raise them to a life *worth* living. It is not so much the infirmity that causes unhappiness as the grief of a useless dependent existence. The human being who lacks an arm or her eyes, but who makes the best of her incomplete self, rises to the highest moral stature of our race."

To the parents of a four-year-old blind boy Helen Keller wrote: "I beg you to soften your grief by looking at his handicap hopefully. Out of the fullness of my experience I can assure you he has a good fighting chance. You can help him win an education just like any other child, guided by the understanding and the faith of those who study the blind and their problems; he can gain knowledge and grow up strong and able to find joy in living."

On another occasion she wrote: "I thank God for my handicaps, for through them I have found myself, my work and my God. Life is either a daring adventure or it is nothing. It has ever been thus with me that the wonderfulness of life and creation rose with each day I live. When Rabindranath Tagore visited the United States, he came out to see me. Serene, gracious, he saluted me in a monotone almost like a prayer. I told him that I knew he loved humanity; he talked of poetry, of India, and the power of the spirit that alone can bring freedom. I could not help thinking of Mahatma Gandhi who not only heard his message of love, but also taught it and let it shine in his deeds before all men. I do not pretend that I know the whole solutions of the world's problems, but I am burdened with the puritanical sense of obligation to set the world to rights. I feel responsible for many enterprises that are not really my business at all. But many times I have kept silence on issues that interested me deeply through the fear that others would be blamed for my opinions. I have never been willing to believe that human nature cannot be changed, but even if it cannot I am sure it can be curved and led into channels of usefulness. I believe that life not wealth is the aim of existence: life including all its attributes of life, happiness, and joyful labour; I believe that war is the inevitable fruit of our economic system, but even if I am wrong, I believe that truth can lose nothing by agitation, but may gain all.

"It is not possible for civilisation to flow backeards, while there is youth in the world; youth may be headstrong, but it will advance its allotted length. Through the ages in the battle with the powers of evil, with poverty, misery, ignorance, war, ugliness and slavery, youth has steadily gained on the enemy. That is why I never turn away from the new generation impatiently, because of its knowingness. Through it alone shall salvation come. Yet the process of the emancipation of mankind from old ideas is very slow. The human does not take to new ways of living readily, but I do not feel discouraged. Personally I am impeded by physical disabilities which generate forces powerful enough to carry me over the barriers. This is true of the world's problems too. It is for us to work with all our might to unite the spiritual power of good against the material power of evil. It is for us to pray not for tasks equal to our powers, but for powers equal to our tasks; to go forward with a great desire forever beating the door of our hearts as we travel towards the distant goal. Man is unconquerable when he stands on the Rights of Man. There is always a new horizon for onward-looking man. I believe that life is given us so that we can grow in love. I believe that no good shall be lost and that all man has willed or hoped or dreamed of good should exist forever. I believe in the immortality of the soul because I have within me immortal longings. I believe that the state we enter after death is wrought of our own motives, thoughts, and deeds. I believe that in the life to come I shall have the senses I have not had here, and that my home there will be beautiful with colour, music, and speech; flowers and faces I love;

without this faith there would be little meaning in my life, I should be a mere pillar of darkness in the dark."

Mr Boulter Thank you, Mr Jarvis. These then were the people whose passing we mourn, but in those wonderful lives we rejoice today. The World Council for the Welfare of the Blind has had, and continues to have, many fine people who have helped it with its work. We meet here today in New Delhi under a new cloud in the recent, the very recent death, just a few days ago, of the one who was a very close personal and professional friend of Helen Keller and Colonel Baker: Mr George L. Raverat, who was also one of our first group of Honorary Life Members and who was a founder of our organisation, died just a few days ago.

It is now my responsibility to read to you the names of those members of the Council and our committees who have died during the five year period since last we met in full session: Mr R. M. Alpaiwalla of India, Mr C. W. G. Anderson of the United Kingdom, Mr W. G. Askew of the United Kingdom, Prof. Paulo Bentivoglio of Italy, Sr J. D. 'Albequerque y Castro of Portugal, Mr James Cormack of the United Kingdom, Mr W. McG. Eagar of the United Kingdom, Don Jose Esquero Buergos of Spain, the Rev. Gabriel Farrell of the United States, Dr Adolph Francescati of Switzerland, Mon Francois Jerbe, of France, Mon Paul Guinod of France, Mon Donatien Leliere of France, Mon Raymond Lejalle of France, Sir Clutha Mackenzie of New Zealand, Mr Hamish MacKenzie of Australia, Dr Alexander Reuss of the German Federal Republic, Mr Adrian L. Rikarde of Syria, Dr Louis B. Rodemberg of the United States, Prof. Jacobus ten Broek of the United States, Miss Maria Teresa Tullio of Portugal. I now ask all of you if you will stand for a few moments of reflection on the lives of our friends, during which period the last post will be sounded by trumpeters of the Rajputana Rifles Regimental Centre.

OPENING BUSINESS SESSION

Wednesday morning, October 8, 1969

Chairman: **Mr Eric T. Boulter,** *President, World Council for the Welfare of the Blind*

THE PRESIDENT'S REPORT

on Activities of the World Council for the Welfare of the Blind, 1964-1969

The period that has elapsed since last we met in General Assembly in New York in August 1964 has been one of challenge, advancement and substantial accomplishment. Allow me at the outset, therefore, to express my very deep gratitude to my fellow Officers for the unswerving support they have offered me and without whose unstinted efforts the achievements of the last five years could not have been recorded. I refer, of course, to our distinguished Vice Presidents, Donna Dorina de Gouvea Nowill and Mr Hideyuki Iwahashi, to that devoted servant of the Council, our Treasurer, M. Henri Amblard, and to our energetic and capable Secretary-General, Mr John E. Jarvis. I am indebted, too, to those loyal and dedicated individuals who no longer hold office in the Council but who made major contributions to its work during their terms of office. I refer to our friends the late Prof. Paolo Bentivoglio, to Prof. Dr Carl Strehl and Mr Stevan Uzelac.

In addition to the special responsibilities accorded the Executive Committee, the work of our Council proceeds between meetings of the General Assembly through the operations of our Consultative and Standing Committees. On behalf of all members of the Council I wish to record our indebtedness to the Chairmen of these Committees for the ingenuity and talent they have brought to bear on the many problems that concern us in their respective fields of endeavour. We are all aware that the limited financial resources of the Council do not permit us to allocate large budgets to these committees, so that the major part of their work must be undertaken by correspondence. Yet our Committee Chairmen and their associates have in most instances devised methods by which physical meetings of their committees could be called. During such meetings decisions had been taken, activities launched and recommendations prepared for our consideration during the course of this Assembly. It has been my privilege to attend a number of meetings of these committees since assuming the Presidency. I have greatly enjoyed my participation in the Conference of the International Council of Educators of Blind Youth in Watertown, Mass., United States, in 1967 and the meeting of the Braille Music sub-committee of the World Braille Council in Belgrade in the same year. The Standing-Committees whose meetings I have attended include the Regional Committees for Africa and Europe, the Committee on Technical Appliances, Committee on Services for the Deaf-Blind and the Finance Committee.

In April 1967 your Executive Committee, at the kind invitation of the Government and the Association of the Blind of Yugoslavia, met in Belgrade. In an atmosphere of warm comradeship your Committee studied a series of important matters, and conclusions, which will be of great significance in the future life of the Council, were reached. As the minutes of that meeting have been circulated to all members, you are aware of the items covered in that agenda. I would, nevertheless, draw your attention to a matter which caused me great personal gratification. That was the resolution unanimously adopted by the Committee under which the separate segments of politically divided countries may each be admitted to membership of WCWB. This decision was arrived at following highly valuable work accomplished by a special committee I had named under the chairmanship of Mr Stevan Uzelac and with Mr John C. Colligan and Mr Hans Seierup as members. The purpose of the resolution is to prevent the exclusion of large numbers of blind persons from representation in our Council, through accredited organizations of or for the blind, purely on political grounds. Since the resolution was adopted and implemented it has given us great pleasure to welcome to membership under its provisions both the German Democratic Republic and the Republic of Korea.

Another important conclusion arrived at during the Belgrade meeting was the decision to hold this General Assembly here in the beautiful city of New Delhi. Even by this, our opening day of the Assembly, it has become clearly apparent to all of us how diligently our friends within the Government and voluntary organizations of India have laboured to provide maximum facilities for our personal comfort and our professional deliberations. We are truly confident that our gathering here will be long remembered as a highlight in the history of the Council.

You will shortly learn from the report of the Secretary-General that during this quinquennium our Representative Membership has grown from 43 to 53 countries, with several other countries having joined us in Associate Membership. During my term of office and including the tour on which I am now engaged I will have visited 32 Member or Associate Member countries since becoming your President. It has been a great honour for me to do so and I have thus had a unique opportunity to personally observe the vitality of the work that is proceeding for the prevention of blindness and the education, rehabilitation and general well-being of the blind in WCWB countries around the world. It is certainly our hope that we may be able to attract more countries to seek Representative Membership, but we recognize that financial stringency may now impede some small or poorer states. The Executive Committee has, therefore, named a special committee composed of the Officers of the Council and the members of its Finance Committee to study this problem. During the course of the Assembly you will receive certain recommendations from the Executive Committee deriving from the activities of the special committee.

As has been the case since the inception of World Council for the Welfare of the Blind, we maintain close contact with the United Nations and appropriate specialized agencies of the UN family. The United Nations continues to display deep interest in the topic of blindness and to extend valuable services to many member countries for the improvement of their own programmes. In the conduct of its work the United Nations has frequently called on WCWB for advice and guidance in our field of specialized interest, and our assistance has been freely extended on all occasions. We have been particularly pleased to note that since last we met in General Assembly three Specialized Agencies of the United Nations have instituted courses of action that have long been recommended by WCWB and the other international NGOs with which we are intimately connected.

Late in 1964 the General Conference of UNESCO recognized that it was a clear responsibility of that international governmental organization to maintain a programme for the special education of physically handicapped children. Accordingly the Secretariat was authorized to engage the services of a full-time staff member with responsibility for designing new programmes of assistance to countries in the development of good special education services. Our Secretary-General and I were invited to participate in an initial meeting of experts at UNESCO headquarters at which a tentative outline of the new department's operating pattern was devised. Our Secretary-General was later invited to become a member of a more permanent board of experts with responsibility for maintaining close advisory liaison with the on-going programme. While the work of this new department has not yet extended as broadly as we might wish, a very useful start has been made and we are confident that highly valuable services will in future be made available to requesting governments.

The International Labour Organization has a long and outstanding record of service in the vocational rehabilitation of the physically handicapped, including the blind. WCWB has worked extremely closely with its representatives in Geneva and elsewhere for very many years and has been richly rewarded by the noteworthy accomplishments that have been achieved in the service of blind adults the world over. It has therefore been particularly gratifying to observe that a new and strongly worded declaration on vocational rehabilitation of the handicapped has been developed and widely disseminated by this international organization. We are convinced that this action has already had a very considerable effect in drawing to the attention of world governments the need for fully discharging their responsibilities for the rehabilitation of their disabled citizens. We can anticipate with confidence that under the interested leadership of members of the ILO staff, as well as its governing body, this process will be maintained and expanded for the benefit of large numbers of blind persons in the years immediately ahead.

Earlier this year very important negotiations were undertaken with high officials of the World Health Organization in Geneva by the Chairman of our Committee on Prevention of Blindness, Mr John Wilson, and the Acting Secretary-General of the International Association for the Prevention of Blindness, with which non-governmental organization we have closely collaborated for several years. The purpose of these negotiations was to persuade the WHO Secretariat that the massive level of world's blindness now required that WHO should accept the topic of prevention, control and treatment of blindness as a major area of its general programme concern. Full success was achieved in these initial contacts and it was agreed that the national affiliates of WCWB and IAPB should be requested to urge their governments to introduce or support resolutions on that topic at the July 1969 meeting of the World Health Assembly in Boston, Massachusetts, United States of America. As a result of the devoted labours of WCWB's Officers, our Prevention of Blindness Chairman and the Secretariat, as well as the enthusiastic and energetic action of our members around the world, coupled with equivalent action by IAPB, a strong resolution was unanimously adopted in Boston. As a result, the WHO Director General is now required to develop a work programme for submission to the next meeting of the World Health Assembly, compiling such recommendations in close collaboration with appropriate interested and active non-governmental organizations. WCWB is one of those which will collaborate fully in the preparation of the plan, and it is our fervent hope that really worthwhile services for the prevention, control and treatment of blinding diseases will eventuate.

It will be recalled that WCWB was one of the small group of international NGOs which was responsible for the creation several years ago of the Council of World Organizations Interested in the Handicapped. From the time of its initial creation the principal location of CWOIH was in New York, with most of its Officers and members of its Executive Committee located there in close proximity to United Nations headquarters. In 1964 it was resolved, at least on a temporary basis, the venue of CWOIH should be moved to Europe, close to the seats of many UN Specialized Agencies, with its Officers and Executive Committee members being principally drawn from NGO personnel on that side of the Atlantic. When this change occurred, our Secretary-General, Mr John Jarvis, was elected to serve as Vice-Chairman of that Council, later assuming the Chairmanship. I need hardly assure you that he has discharged both functions with great distinction, bringing much reflected glory to WCWB and advancing the interests of the blind along with those of other categories of disability in outstanding fashion. By long-standing arrangement CWOIH is authorized to name three delegates and three alternate delegates to the periodic meetings of the United Nations inter-agency Committee on Rehabilitation of the Handicapped. At a meeting of that Committee held in Geneva, July 1968, Mr Jarvis served as a Delegate, while I was privileged to act as an Alternate Delegate. The sessions of this Conference are utilized by the United Nations and its Specialized Agencies to develop new approaches to the rehabilitation of the handicapped and to achieve maximum coordination of efforts between themselves and the active Non-Governmental Organizations. The Geneva meetings were outstandingly successful in achieving those objectives. Other United Nations gatherings at which WCWB has played an influential role include the meetings of the Ministers of Social Welfare in 1967 and 1968, held under the auspices of the Economic and Social Council. It has always been one of our prime objectives to insure that at meetings of this kind the special needs of the handicapped, including the blind, shall be placed in the forefront of attention. Accordingly our Secretary-General requested the members of the Council to endeavour to influence their national delegations, while we associated ourselves with official statements made to the Ministers by the CWOIH. As a result, the final statements issued by the Conferences have included paragraphs recognizing the responsibity of governments for providing special services to meet the needs of their physically handicapped citizens.

The Council continues to be an Associate Member and to play an important role within the International Council on Social Welfare. A unique honour has been accorded WCWB in that Officers of our Council have been named to serve as Chairmen of the Study Group on the Physically Handicapped at each of the last two biennial ICSW meetings. I was extremely pleased to serve in that capacity at the Conference in Washington, D. C., U.S.A. in 1966, while our Secretary-General, Mr John E. Jarvis, was Chairman of the study group for the Conference in

Helsinki in 1968. We have similarly been represented at other important international gatherings. These have included special workshops for NGOs in consultative relationship with UNICEF, held in conjunction with that Fund's Executive Board Meetings in Addis Ababa in 1967, when we were represented by Mr Abede Kebede and in Santiago, Chile in 1969 when we were represented by Mrs Alicia Canas de Errazuriz. Our distinguished Treasurer, M. Henri Amblard, has continued to serve as our official representative at National Congresses of the World's Veterans Federation. Vice-Chairman Hideyuki Iwahashi attended the 1968 Pan Pacific Conference on Rehabilitation in Hong Kong on our behalf, while Mr Charles Hedkvist, in his capacity as Chairman of our Professional and Urban Employment Committee, attended the 1969 World Congress of the International Society for the Rehabilitation of the Disabled, in Dublin.

On behalf of all members of the Council I wish to express very sincere gratitude to the official and un-official members of our Secretariat who have worked so diligently with the Secretary-General, Mr Jarvis, and myself to maintain the Council's work at a high level of efficiency during the last five years. I refer particularly to Madame Evelyne Lerou, our Administrative Assistant in Paris, Miss Betty Leppard, the former Administrative Assistant in London, Miss Bettyne Blunden and my own two secretaries in New York, Miss Noel Fontaine and Mrs Frances Eager. Through their efforts, and with the help in 1964 and 1965 of our former Assistant Secretary-General, Miss Annette Watney, the Proceedings of our 1964 World Assembly were produced and widely disseminated to members and to governments and other workers for the blind throughout the world. The semi-annual WCWB Newsletter has been prepared and circulated without interruption, even being sent to members this spring, when all members of the Secretariat were busy preparing for this Assembly. A considerable amount of additional documentation has been sent to all Representatives, Honorary Life and Associate Members, including the minutes of meetings of the Executive Committee and copies of appropriate Committee reports. Invoices in respect of membership fees have been duly prepared and sent out, while the books of the Council have been maintained in good order by the Secretariat under the general direction of our Treasurer, M. Amblard.

Our deep gratitude must also be expressed to the Royal National Institute for the Blind and to St. Dunstan's for their generosity in covering the salary of our Secretary-General and the major part of the salary of his secretary, as well as providing office space for them in London. I am sure you would also wish me to express thanks to the Board of Directors of American Foundation for Overseas Blind for continuing to provide office space for the Council in Paris. The Council's office has now been moved to fine new quarters at 14 bis Rue Daru, where members of the Secretariat will be delighted to welcome any Council members who may be able to visit.

As we approach the labours of the next ten days, I am sure that all of us are impressed by the varied nature of the programme and the opportunity it provides us to learn from each other for greater service to the blind. We are indebted to Mr A. N. Magill and the members of the Programme Committee for the imaginative manner in which they have approached their tasks and for the excellence of the programme they have prepared. Above all, we must express heartfelt thanks to our Indian hosts for the great honour they have done us in permitting us to meet in this great and beautiful country. Many of this nation's most distinguished sons and daughters will grace our podium or have invited us to meet with them elsewhere during the course of our stay. We feel greatly privileged to take advantage of this opportunity. None of this would have been possible without the long hours of hard work that have been expended by the Chairman of our Local Arrangements Committee, Mrs Queenie Captain, the Chairman of the Reception Committee, Dr (Mrs) Durgabai Deshmukh, Capt. H. J. M. Desai, Dr. Rajendra Vyas, Mr Suresh Ahuja, and the scores of others who have volunteered their time, talent and energy to prepare this great occasion for us. They have made an inestimable contribution to the ongoing work of WCWB and in your name I wish to express our deepest gratitude.

It has been a great privilege for me to serve as your President. I have greatly enjoyed the challenges of the past five years and gained more personal pleasure than I could possibly describe from the friendly professional contact I have had with all of you. It would have been difficult for any person to follow that great humanitarian and leader of men, our first President, Col. E. A. Baker, and I cannot hope that my own efforts have come even close to matching his contribution. Nevertheless, in my judgment the last five years have been a period of consolidation, progressive growth and notable achievement. I am confident, that during this present Assembly new ground will be broken and new programme avenues in the fields of prevention and service will be explored. I am sure that each of you will endeavour to make his or her maximum contribution to our labours during the days immediately ahead.

ELECTION OF COMMITTEES

Mr Boulter

Ladies and Gentlemen: I would like now to proceed with the first item on our agenda, which is the requirement of creating the committees that are necessary to conduct our work during the next few days. It has traditionally been the prerogative of the President, in consultation with other officers and key members of delegations around the world, to put forward to the Assembly some recommendations about the compositions of these committees, and I would like to do so now. Will the Secretary-General please read my suggestions for the composition of the Resolutions Committee, and if they meet with your approval I hope then that one of you will propose the adoption of this group of names and the seconding of that proposal.

Mr Jarvis: Mr President, your recommendations for the composition of the Resolutions Committee was that Mr John Wilson of the United Kingdom delegation might be its Chairman, and that it might have six other members:

Mr Hedkvist, Sweden
Judge Rees Robrahn, United States
Dr Horst Geissler, German Federal Republic
Mr Boris Zimin, Union of Soviet Socialist Republics
Mr Austin Chibututu, Nigeria
Mon Nicol, France

We try to make the important Resolutions Committee both geographically representative, and composed of outstanding people with broad experience in the field.

The motion was moved by Mr Satrustegui of Spain and seconded by Mr Colligan of the United Kingdomand then passed without discussion.

Mr Boulter: Mr Secretary-General, will you now be good enough to read the names of those persons we suggest to serve on the Credentials and Proxies Committee ?

Mr Jarvis : Mr President, for the Credentials and Proxies Committee you suggested that it should be composed of three delegates : Chairman, Mr Frank Turley of Australia, and the other two members should be Mrs Tiruchelvam of Ceylon and Dr Claude Chambet of France.

Mr Boulter : The responsibility of this group is to examine the proxies that have been brought here by some delegates on behalf of the delegates who cannot attend, from their own countries, or from neighbouring countries, or which have reached us in other ways, and also to handle the matters that may come up concerning the credentials of any persons here in attendance. I think you will recognise that it was necessary to select for this committee three people who were possessed of sight as they have to examine a number of documents constantly.

The motion was moved by Begum Tyabji of Pakistan and seconded by General Ammannato of Italy and then passed without discussion.

Mr Boulter: Mr Secretary-General will you read the names that are proposed for the Nominations Committee.

Mr Jarvis: For the Nominations Committee, Mr President, you proposed that it should consist of five delegates, and that its chairman should be Mr Satrustegui of Spain, that its four members should be Mr Getliff of the United Kingdom, Captain Desai of India, Dr Pielasch of the German Democratic Republic and Mr Alagiyawanna of Ceylon.

Dr Geissler of the German Federal Republic suggested Mr Koster of the Netherlands and Mon Nicol suggested General Ammannato of Italy as additional members. The motion including the extra names was proposed by Mr Cyril White of New Zealand and seconded by Dr Fatima Shah of Pakistan, and then passed.

KEYNOTE ADDRESS

THE BLIND IN AN AGE OF SCIENCE

By **Mr A. N. Magill,** *Managing Director, Canadian National Institute for the Blind, Canada*

Ladies and Gentlemen, and Distinguished Guests:

With all of us enjoying the splendid arrangements that have been planned so carefully for our benefit, I cannot begin in a more fitting way than by expressing my personal appreciation to the members of the Programme Committee, the Chairman and members of the Host Committee and to all those who in any way contribute to the smooth operation of our Fourth General Assembly. You know, last year in Toronto, Canada, the CNIB was host to the American Association of Workers for the Blind and I understand only too well through personal experience the careful forethought and hard work that is necessary to bring off a conference of such high calibre. Congratulations.

Your Programme Committee and the many specialists who graciously agreed to take part developed a series of sessions that will draw to your attention the most modern skills in rehabilitation of the blind. You will also learn in detail about the more interesting equipment that is now taking shape in many member countries of the WCWB.

When you read your programme, I am sure you noted that the last session has been designated as a discussion meeting so that you may ask questions about the papers that have been given. More important still, we want your suggestions as to how each organization or individual can co-operate with each other and make available information and services within a given region.

In choosing the theme, "The Blind in an Age of Science," your Programme Committee was conscious of the gigantic strides that science has made in the last twenty years and the application of scientific principles to our work. Then came the successful conquest of the moon and with it the beginning of not merely another chapter in history, but the dawning of a complete new age—an age that will influence the lives of all men no matter how far removed from the centre of action.

While so far the United States has taken the leadership in the space programme; it is quite evident that the Americans are thinking in terms far more universal than their own country. This idea was made manifest from the first words spoken on the moon. When Neil Armstrong descended the ladder from the lunar module and stepped from the bottom rung to the surface of the moon itself, he said, "One small step for man, one giant leap for mankind." The same idea is clear from the wording on the plaque which the astronauts left among the scientific equipment. "Here, men from the planet earth first set foot upon the moon, July, 1969, A. D. They came in peace for all mankind." Already other countries have recognised the significance of this universal thinking and have indicated their readiness to co-operate in the further conquest of space.

It is interesting to make a comparison between the landing on the moon and the landings in new continents between the fifteenth and eighteenth centuries. You may feel there is no comparison but I believe there is. The explorers of those early times had no knowledge whatsoever of what lay across the sea. They set forth in small, crudely built ships, poorly provisioned and equipped for the stormy crossing before them. While at first only the bravest of seamen made the trip, the development of the new lands had a surprising effect on the rest of the world. The idea of newly discovered continents was most exciting. It brought to the citizens of the Old World something to think about outside themselves. It provided the hope of new life and high adventure. The discoveries brought an impetus to the economy.

I predict that the moon probe and its fuller development, the move to Mars and all that lies ahead, will quicken the pace of life for every one of us. Space research will offer a goal to all countries in which they can co-operate to the limits of their resources and for the first time give men of all the earth a united objective. It will accelerate scientific advancement and economic progress the world over.

Perhaps you are wondering, "Where does the blind person fit into this picture ?." He cannot be an astronaut and his chances of being physically involved in space travel are indeed limited. This aspect of the new field may be true but in my view the scientific developments of today, heightened by space research, will have many by-products and more and more of these will have an application to the problems of blindness.

May I quote an example. No doubt all of you have read from time to time obscure news reports about the development of an instrument that would bypass the eyes and bring light into the visual centre of the brain. However, it was only this year that the visual prosthesis, as the device is called, was explained in detail at the American Association of Workers for the Blind in Chicago. I can assure you that it was an inspiring moment for me and some 500 delegates to the A.A.W.B. to hear Dr E. F. MacNichol, Jr., of the National Institutes of Health, explain in detail the progress made to date in bringing a visual object to the totally blind. Dr MacNichol was careful to explain that the prosthesis was not yet past the pilot stage and declared that there would be no attempt, as in the case of heart transplantation, to rush into general service. From his comments it was obvious that the moon probe was already motivating Dr MacNichol and his colleagues. "We now know the technique to put a man on the moon and bring him back safely," the doctor said, "but this same scientific knowledge and knowhow has not been applied to help develop a seeing prosthesis for blind people and as yet there have been few scientific developments for the mobility of the blind with the exception of the long, white cane."

The computer is a further demonstration of the application of scientific development to work for the blind. The first computer went into action many years ago and has spread to almost every large industry, speeding up service far beyond expectation. The computerized plane reservation most of us enjoyed in coming to this meeting is only one example.

The computer has certainly had its application to work for the blind. The training and placement of blind programmers is now an accepted phase of career possibilities in industrialized countries throughout the world. The computer is also being applied to the printing of Braille and it will soon be the practice to print Braille books with lightning rapidity.

There is one phase in all this development where the WCWB, through its technical committee, is doing the blind of the world a great service. Before I explain this service I must first explain the need. In Canada, C.N.I.B. is making continuous grants for the development of the Lexiphone, a device that translates the printed page into sound and reports the letters in terms of tonal beeps. A similar machine is now being researched at Stanford University in the United States. A few years ago, England designed an electronic guiding device. A short time later, the Americans produced the laser cane, Each country seems to be doing its own research and producing its own aids for the blind as best it can. May I point out that the time has long since passed for such isolated research. Why waste priceless talent and facilities in one country on the same project that is under way in another ? There is a central clearing house known as the International Research Information Service (IRIS) where each country can report its research projects and information may be exchanged. Resources are pooled. The results from one project can be the starting point of the next one and research for the blind people of the world should advance as never before. Just as the major countries of the world will now begin to work together on space, so they should join forces on blindness, provided they receive the necessary leadership and guidance, which is a contribution the W.C.W.B. can make.

In the midst of this progress, there is a serious question. Most of the research under way today will go into production tomorrow and here I mean tomorrow in the sense of five to ten years from now. The visual prosthesis, the sound print reader, computerized Braille and the numerous electronic instruments now on the planning board will require considerable development before you and I can hold a small box to our foreheads and see something out front. Much more research must yet be done before instant Braille will put the daily newspapers at your fingertips. Between today's prototype and tomorrow's finished, useful product lie several years. How are we to serve the blind between now and then ?

It has been my experience in some countries that specialists in our work are almost overwhelmed by the vast number of blind people requiring service. They view any action they may take as useless, with the result that often no action is taken. Now these experts will see the new projects shining on the horizon and they will say, "If a prosthesis that will provide sight is so close, why start a rehabilitation programme at all ?" My friends, there are many blind persons who will never live to read computerized Braille but whose lives could be so much more satisfying and useful if they could receive the ordinary basic rehabilitation services. The programme cannot be postponed. The needs of the present generation must be met while we are waiting for science to end those needs.

I would like to present a few guidelines that I believe are rudimentary to the establishment of a service programme. When the problems of blindness seem too immense and the service so small, pool your resources. An agency does not have to be limited to the borders of a village. Get in touch with the nearest organization. Discuss your difficulties. Share your programme. Use all available energies and resources. Avoid duplication of a service. Work together and the first thing you know, the small service you hesitated to start will be a larger, more constructive programme, assisting a reasonable number of blind persons.

Be practical in providing your service. Make sure that it meets the needs of blind people. At first glance, that statement seems self-evident, but in my experience it cannot be repeated too often. Do not start a library if the blind you serve would benefit more from a simple craft. If they could learn to make some marketable product, establish an income and raise their standard of living, your service would indeed be meeting a crying need.

In short, do not set up an organization for the sake of the organization itself. Keep your mind on the practical programme, the one that is really needed.

Let your programme radiate enthusiasm. How often does the job become a chore ? This is particularly true at the service level where the worker is dealing directly with the blind person. He knows Mr X with his failures and limitations, his endless complaints. It is very easy for the contact worker to give Mr X little more than the time of day or bypass him altogether. It is the job of the administrator to motivate the workers at the service level so that they will see in Mr X a challenge and do their very best to help him. Make him welcome. Let him see that his problem is important, that you truly want to help, and who knows what latent abilities you will bring to the surface ?

Work for the blind has become a broad highway. Every type of person, with his own individual ideas and concepts, moves along the road. Perhaps they can be divided into the dreamers and the men of action, and there is a place for both. The dreamer sees computerized Braille and its many advantages. He is a planner, an inventor, one who sees beyond the horizon and designs a new compass to keep us on course. The men of action take it from there. They are the practical men who analyse the costs. They implement and operate the programme and make the dreams a reality. Both are members of the same team and equally necessary. They complement each other in providing services to the blind people of the world.

Now for the final word, and it is a warning. With all the emphasis on rocketry, the space age and the new sciences, we should not forget the most important factor of all—the human factor. We are now turning over to the machine more and more of our personal prerogatives. In business, the computer is working in the field of decision making. In the school, programmed learning is reducing the personal role of the teacher. In work for the blind, these influences are present and we are in danger of losing sight of the true dignity of the human being. All of us here today and attending this Assembly are deeply committed to developing efficient and realistic services for blind people and utilizing the most modern technology in the field of prevention of blindness. Although we may become entranced with the latest equipment under research or already available, we should always be conscious of the individuality and personal dignity of those we are attempting to serve. The gadgetry can never become an end in itself and man should not be patterned to fit its demands. As long as we keep this principle in mind, the conquest of space has a rich storehouse of scientific tools for the betterment of both blind and sighted.

REPORT ON W.C.W.B. MEMBERSHIP

The Secretary-General reported that since 1964 we had lost Ghana through currency control, and Syria for financial reasons, but we now had 53 member countries, because twelve new countries had joined us. They were Bulgaria, German Democratic Republic, Greece, Kenya, Kuwait, Luxembourg, Panama, Republic of Korea, Singapore, Sudan, Trinidad and the U.S.S.R. The situation with regard to Associate Members was even more encouraging. We had lost Les Amies des Aveugles in Morocco, Deutchesblindenhilswerk, the Trinidad and Tobago Blind Welfare Association and the American Council of the Blind. Trinidad had now, however, become a Member Country, and the American Council was now a constituent member of the U.S. Delegation. On the other hand no less than 33 Associate Members had joined the Council, giving a total of 48 as compared with only 15 at the time of the last Assembly. The Executive Committee had suggested in Belgrade in 1967 that each Country ought to set itself a target of recruiting at least as many Associate Members as the number of its National Delegation. Since then two countries, Japan and Spain, had attained this. Thanks to the untiring work of Mr Iwahashi, six Associate Members had been recruited in Japan, and through an equally active campaign conducted by our good friend Don Ignacio Satrustegui, Spain now had the same number of Associate Memberships as its Delegation.

With regard to Honorary Life Members, the Secretary-General was obliged to report with the greatest regret that death had now deprived us of all but one of our Honorary Life Members, Mr Kingsley C. Dassanaike from Ceylon.

The Adoption of the Report on Membership was Proposed by the Secretary-General, Seconded by Mr Getliff, and AGREED unanimously.

REPORT OF THE TREASURER

UNION
DES
AVEUGLES DE GUERRE
Groupement National des Aveugles de Guerre
——— **Paris May 30th, 1969.**
SIEGE SOCIAL
49, RUE BLANCHE, 49
Reconnue d'UtilitePublique, Decret du 9 Avril 1921

Telephone : TRINITE 85-83,
Compte Cheques Postaux 160-31.

Dear Colleague,

We have the pleasure of presenting to you the financial report and the accounts for 1968 as required by Article 8 of our Constitution.

On the eve of our General Assembly that is to take place in New Delhi in October, a close study of this Report will give you an exact idea of our organisation's possibilities.

We note with satisfaction that our Member countries pay their subscriptions punctually. Associated members and organisations who have joined us voluntarily have sent us their promised aid on time. And though there may be a few countries with subscriptions overdue, nevertheless they all wish to carry out their engagements.

There are three headings to be examined : the dollar account from New York, and from Paris a franc and a dollar account. As last year it is all laid out in the clearest possible way and you will notice that the balance shows a satisfactory asset of :

$ 35.315,15 — or, : Fs. : 173.043,50

Moreover, we submit to you the Louis Braille Museum accounts which have been considerably increased thanks to the gift of Fs.: 8.520,00 from the Gulbenkian Foundation.

This is all very well, yet we should do better for the W.C.W.B. with its twenty years' existence and now solidly established, should tend towards a fuller development in order to accomplish the immense task of furthering the evolution of the blind throughout the world.

Yours sincerely,

H. AMBLARD

Treasurer—W.C.W.B.

AUDITORS' REPORT

We have examined the Balance sheet of the World Council for the Welfare of the Blind as at December 31, 1968 and the related Statement of receipts and disbursements for the period of five years then ended. These accounts have been prepared by us from the records, documents and other information produced to us by the organization in Paris. We have included amounts taken from statements prepared by the New York Office, which have not been audited by us.

Apart from the above reservation, our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the records and such other auditing procedures as we considered necessary in the circumstances. As to dues received from members, contributions and other receipts, it was not practicable, because of their nature, to extend the examination beyond accounting, on a test basis, for the receipts as recorded.

In our opinion, and except as stated above, the accompanying Balance sheet and Statement of receipts and disbursements present fairly the financial position on a cash basis of the World Council for the Welfare of the Blind at December 31, 1968 and the results of its operations for the five years then ended.

Paris, August 22, 1969.

Sd. Peat Marwick, Mitchell & Co.

WORLD COUNCIL FOR THE WELFARE OF THE BLIND

Balance Sheet

December 31, 1968

Assets	French *francs*	Equivalent *in U.S.$*	*Liabilities*	French *francs*	Equivalent *in U.S.$*
Cash at banks and on hand:			**General fund account:**		
Paris:			Balance at December 31, 1963	147,175.69	30,035.86
General account-French francs	24,946.96	5,091.22			
General account-U.S.$	34,154.22	6,970.25	**Add:**		
"Louis Braille Memorial Fund"-French francs	5,893.02	1,202.66	Excess of receipts over disbursements for the period January 1, 1964 to December 31, 1968	22,850.66	4,663.40
Cash on hand	545.48	111.32			
New York:					
General account-U.S. $	23,842.92	4,865.90	Balance at December 31, 1968	170,026.35	34,699.26
Blocked account-Indian rupees	411.60	84.00	"Louis Braille Memorial Fund"	20,893.02	4,263.88
	89,794.20	18,325.35	Accrued charges	2,074.83	423.43
Investments:					
Paris:					
French Treasury bonds-"Louis Braille Memorial Fund"	15,000.00	3,061.22			
New York:					
Savings and loan accounts	88,200.00	18,000.00			
	192,994.20	39,386.57		192,994.20	39,386.57

Notes. 1. All conversions have been made at the rate of U.S. \$1=F.4,90, which was the approximate rate of exchange at December 31, 1968.

2. Outstanding subscriptions receivable at December 31, 1968 totalled F.20.000,00 (U.S.\$4,100.00).

3. The blocked rupee account is payable in Indian rupees only.

WORLD COUNCIL FOR THE WELFARE OF THE BLIND

Statements of Receipts and Disbursements

For the five year period ended December 31, 1968

	Total		Paris		New York	
	French *francs*	*U.S.$*	French *francs*	*U.S.$*	French *francs*	*U.S.$*
Receipts						
Subscriptions received from representative members	346,752.43	70,765.80	232,710.76	47,491.99	114,041.67	23,273.81
Donations	5,686.20	1,160.45	..	..	5,686.20	1,160.45
Sales of publications	458.10	93.49	255.97	52.24	202·13	41.25
Interest on Treasury Bonds	1,039.17	212.07	1,039.17	212.07	..	..
Interest on savings bank account	20,938.43	4,273.15	..	..	20,938.43	4,273.15
Miscellaneous	56.06	11.44	56.06	11.44	..	..
	374,930.39	76,516.40	234,061.96	47,767.74	140,868.43	28,748.66

Disbursements						
Salaries and social charges (including temporary staff)	136,190.97	27,794.07	107,218.20	21,881.26	28,972.77	5,912.81
Office expenses	23,547.56	4,805.63	21,081.88	4,302.43	2,465.68	503.20
Professional fees	2,000.00	408.16	2,000.00	408.16	..	..
Travel expenses	14,376.11	2,933.90	14,376.11	2,933.90	..	..
Belgrade meeting expenses	100,944.23	20,600.86	51,253.58	10,459.91	49,690.65	10,140.95
Deaf Blind Committee	1,520.00	310.20	883.00	180.20	637.00	130.00
ICEBY Conference	12,444.09	2,539.61	5,880.00	1,200.00	6,564.09	1,339.61
Prevention of Blindness Committee	3,318.28	677.20	..	..	3,318.28	677.20
World Braille Committee	5,860.89	1,196.10	..	..	5,860.89	1,196.10
Finance Committee	602.70	123.00	..	..	602.70	123.00
Asian Committee	3,694.84	754.05	..	..	3,694.84	754.05
European Committee	2,450.20	500.04	..	..	2,450.20	500.04
Inter-American Affairs Committee	980,00	200.00	..	..	980.00	200.00
Miscellaneous Meetings	4,721.79	963.63	421.50	86.02	4,300.29	877.61
World Assembly expenses	34,148.34	6,969.05	..	..	34,148.34	6,969.05
Miscellaneous expenses	5,279.73	1,077.50	1,601.79	326.90	3,677.94	750.60
	352,079.73	71,853.00	204,716.06	41,778.78	147,363.67	30,074.22
Surplus/(deficit)	22,850.66	4,663.40	29.345.90	5,988.96	(6,495.24)	(1,325.56)

WORLD COUNCIL FOR THE WELFARE OF THE BLIND

FINANCIAL POSITION AS AT 31st December 1968

		DOLLARS
NEW YORK:	Bank Account	4,865.90
	WCWB Credit Held in Indian Currency	84.00
	Savings and Loan Account	18,000.00
PARIS :	*Bank Accounts*	
	Francs 24,946.96 (4.9 to $)	5,091.00
	Dollars	6,970.25
	Petty Cash Account	
	Francs 551.98 (4.9 to$)	112.00
LONDON :	*Petty Cash Account*	
	£ 80.0.2 (2.40 to £)	192.00
		$ 35,315.15
PARIS :	LOUIS BRAILLE ACCOUNT	
	Bank Account	
	Francs 5,893.02 (4.9 to$)	1.202.00
	Investments	
	Francs 15.000 (4.9 to$)	3,061.00
		$ 4,263.00

NEW YORK ACCOUNT

INCOME	$	
Cash in Hand 1st January 1968		2,672.80
Representative Membership Fees	2,050.00	
Associate Membership Fees	448.50	
Donations:		
From AFOB—designated for WBC Music Sub-Committee	500.00	
Interest on Investments	1,018.80	
Sale of Publications	3.50	
		40,20.80
		6,693.60

EXPENDITURE		
Expenses of Standing and Consultive Committees:		
—Inter-American Affairs	100.00	
—World Braille Council	500.00	
—Asian Affairs (Travel and maintenance grants, August meeting in Manila)	704.05	
Travel loan to Capt. Desai-reimbursable in Indian currency	84.00	
Participation, Membership and subscriptions-International organizations	361.30	
Floral memorials	78.35	
		1,827.70
Cash in Hand 31st December 1968		4,865.90

INVESTMENT ACCOUNT

Savings and Loan Accounts	18,000.00
WCWB Credit Held in Indian currency (see above)	84.00
	18,084.00
TOTAL ASSETS IN NEW YORK:	$ 22,949.90

PARIS ACCOUNT

	Dollar Account	Franc Account	Petty Cash Account FRS
INCOME			
Cash in Hand 1st January 1968	73.45	17,894.72	275.66
Representative Membership Fees	6,497.80	27,092.05	
Associate Membership Fees	399.00	500.00	
Sale of Treasury Bonds		10,950.00	
	6,970.25	56,436.77	275.66
Transfers between Accounts:			
Franc A/C to Petty Cash A/C Paris		—5,450.00	5,450.00
	6,970.25	50,986.77	5,725.66
EXPENDITURE			
Salaries, Tax and Medical Expenses, Paris Secretariat		23,985.30	317.52
Office Cleaning			710.00
Stationery, Postage, Telephone		2,027.95	1,778.39
Bank Charges		8.25	
Miscellaneous		18.31	326.72
Travel & Maintenance Expenses Members of Secretariat			1,871.05
Removal of furniture Evelyne Lerou's office			170.00
		26,039.81	5,173.68
Cash in Hand at 31st December, 1968	6,970.25	24,946.96	551.98

TOTAL ASSETS IN PARIS (Excluding Louis Braille Account)	Francs
Petty Cash in Hand	551.98
Cash in Chase Manhattan Bank Franc Account	24,946.96
Cash in Chase Manhattan Bank Dollar Account ($ 6,970.25)	34,154.22
FRANCS	59,653.16

Calculated Francs 4.9 equals $ 1.00 U.S.

LOUIS BRAILLE ACCOUNT

INCOME	*Francs*	*Francs*
Cash at Chase Manhattan Bank 1st January 1968		3.068.18
DONATIONS		
Gulbenkian Foundation	8,520.79	
C.N.I.B. Canada	224.00	
Ligue Braille, Belgium	487.07	
George Card, USA	124.00	
Comitè National pour la Promotion Sociale des Aveugles, France	1,000.00	
	10,355.86	
Interests on shares	776.25	
		11,132.11
		14,200.29
EXPENDITURE		
Salary and social charges of Custodian	5,976.48	
Insurance L. B. Museum	165.21	
Heating of Museum	761.60	
Expenses in the Museum	903.98	
Purchase of L.B. Publications	200.00	
Given to petty cash account in Coupvray	300.00	8,307.27
Cash at Chase Manhattan Bank 31st December 1968 Francs:		5,893.02

INVESTMENT ACCOUNT

Francs : 15.000.00

LONDON PETTY CASH ACCOUNT

	£. s. d.	£. s. d.
Cash in Hand 1st January 1968		148. 12. 10.
Receipts		
Mr Jarvis' fee at Helsinki Conference, per Mr Boulter	3. 6. 8.	
Royal Commonwealth Society for the Blind	100. 0. 0.	103. 6. 8.
		251.19. 6.
Payments		
Travel and Maintenancc Expenses Mr. Jarvis	121. 3. 8.	
Printing, Stationery, Postage	50. 15. 8.	171.19. 4.
Cash in Hand 31st December 1968 £		80. 0. 2.

WORLD COUNCIL FOR THE WELFARE OF THE BLIND

LOUIS BRAILLE MEMORIAL FUND

Statement of Receipts and Disbursements

For the five year period ended December 31, 1968

(Expressed in French francs)

Balance of Fund at January 1, 1964		25,393·62
Receipts		
Donations	38,907·24	
Sales of publications	1,000·00	
Interest on Treasury Bonds	2,703·75	42,610·99
		68,004·61
Disbursements		
Salaries and social charges	30,788·24	
Purchase of publications	1,111·74	
Maintenance and improvements	11,394·30	
Sundry expenses	3,817·31	47,111·59
Balance of Fund at December 31, 1968		20,893·02

Represented by:

Balance at bank	5,893·02
Treasury Bonds	15,000·00
	20,893·02

REPORT OF THE FINANCE COMMITTEE 1964-1969

By **Mr J. C. Colligan,** *Chairman*

Mr J. C. Colligan, Chairman of the Finance Committee, said that Members of the Finance Committee and of the Executive were aware of the document dated 7th April, 1967, which was submitted on behalf of the Finance Committee and adopted by the Executive at its Belgrade meeting in April, 1967.

These papers showed the financial position of the W.C.W.B. as at 16th April, 1967, together with a budgetary estimate of Income and Expenditure for the period up to 31st December, 1969. From this it will be seen that our *estimated* blance at the 31st December, 1968 was $29,498.

The report of the Hon. Treasurer on the Accounts for the year ended 31st December, 1968 shows an *actual* Dollar balance of $35,350, which, after adjustment for the devaluation of the French Franc in August of this year, gives an actual balance of some $34,748, being approximately $5,000 more than our budget estimate. This increase was occasioned by new countries having joined the World Council since 1967, together with certain additional Associate Memberships.

If we now turn to a forecast for the current year, based on all Representative and Associate Membership Fees for 1969 being paid in full, we arrive at an income figure for 1969 of some $19,430. Against this we must offset the estimated general expense figure for the year of $10,000, plus a further $10,000 budgeted from central funds of W.C.W.B. for the General Assembly, plus travel and subsistence allowance for the Secretary-General and his staff of $3,120, which gives us a total estimated expenditure for 1969 of $23,120, giving a deficit on the year's working of approximately $3,490, thereby reducing our capital balance to approximately $30,000 as compared with $26,000 five years ago.

It would probably be prudent to try to give the General Assembly some idea of a financial forecast for the five-year period commencing 1st January, 1970, and concluding on 31st December, 1974. If we continue to maintain our membership at the current level, we get the following figures:

INCOME

	$	
Subscriptions		
53 countries—		
162 Delegates at $100	16,200	
Associate Members —		
48 at $50	2,400	
Investment Income		
New York $18,000	1,000	
Special Donation		
Royal Commonwealth Society for the Blind (£100 per annum)	230	
	20,000	
Five Years =	say	$100,000

If we propose to conduct our affairs under a similar arrangement to that which has operated during the previous five years, we get the following figures of expenditure :

EXPENDITURE

	$	
Paris Office	6,000	
Secretary-General's Office	600	
Committees	3,500	
	10,100	
Five Years =	say	$50,500

to which must be added the cost of our Executive Committee, plus a $10,000 contribution to the 1974 General Assembly which total, based on the experience of the previous Quinquennium, could be around $30,000. In other words there is a reasonable, though perhaps optimistic expectation that our assets at 31st December, 1974 might have risen to some $50,000, as compared with $30,000 at 31st December, 1969.

These latter figures must, however, largely be pure conjecture in that we have no means of knowing whether our total membership, both Representative and Associate, will rise or fall during the next Quinquennium, or whether the Assembly may decide to raise the level of subscription during the next five years. The cost of the Executive Committee Meeting must necessarily depend upon whether the venue selected is comparable from an expenditure point of view with a choice of Belgrade in 1967, as well as to whether the membership of the Executive Committee will be increased or decreased as a result of the various proposals which are to be considered by the current General Assembly. It would also be unrealistic to assume that a contribution of $10,000 for the General Assembly would be nearly sufficeint in the light of conditions obtaining in 1974 as compared with 1964 and 1969.

Thus the general situation would appear to be that our overall capital position will be more favourable in 1974 than it was in 1969. There is, however, one vitally important factor which must be taken into consideration in any financial forecast for the next Quinquennium, and that is the way in which the office of the next Secretary-General and his staff is to be funded.

For the first eight years of the existence of W.C.W.B. the salary of the Secretary-General and his office was borne entirely by American sources, the only expenditure falling on W.C.W.B. being that of the salary of the Assistant Secretary-General and certain incidental expenditure attached to the Paris Office. During the past ten years, the salary of the Secretary-General, 90% of that of his personal assistant and the cost of his office in London, has been entirely met from United Kingdom sources, leaving only the salary of the Administrative Assistant and certain incidental expenses connected with the Paris office to fall on the central funds.

At the conclusion of this Assembly it will be necessary to appoint a new Secretary-General, and it is vital to consider the terms and conditions under which that appointment can be made. A very rough estimate of expenditure for the period 1970/74 has been based upon a possible continuance of the same generous financial consideration which has been extended to W.C.W.B. up to now by the American Foundation for Overseas Blind, and by the Royal National Institute for the Blind and St. Dunstan's.

Ideally, the W.C.W.B. ought to have its own office with a paid Secretary-General and staff, and this was the purpose of at least one proposal that came before the Executive. Clearly the World Council in its present financial state is *not* really in a position to assume this responsibility, and could not possibly do so unless there were to be a considerable increase in the annual membership fees. A very approximate estimate of the cost of the W.C.W.B. maintaining its own office and Secretariat would be :

	Per Annum $
Secretary-General s Salary, say	5,000
Two staff, say	5,000
Rental, including light, heat, etc. for office accommodation, say ..	2,000
Total ..	12,000

which, based upon the present figure of 162 Delegates, would mean an increase in annual membership fees from $100 to $175. This rate of increase would not seem to be the best method by which to attract new Member Countries, or even to retain some of the existing Members who are finding it difficult to meet fees at the present level. Nevertheless, the Finance Committee and the Executive Committee having carefully considered the importance and necessity of having a firmly established Secretariat in some permanent location, and having received a most generous offer from the A.F.O.B. to provide free of charge all necessary office accommodation, have unanimously decided to recommend:

The appointment of a full-time paid Secretary-General of W.C.W.B., with effect from the conclusion of this General Assembly (say 1-1-70). Such an Officer would be directly responsible to the President and Hon. Treasurer, and to the Executive Committee, whose Meetings he would attend but at which he would not vote. The appointment would be for five years in the first instance. The advantages of this would be that he would be full-time, uncommitted and able to travel and secure new members and solicit financial support for W.C.W.B. It will be remembered that we have a possible anticipated surplus of income over expenditure, from which it appears that we would be justified in funding this appointment without drawing on our slender capital.

The Adoption of the Report of the Finance Committee was Proposed by Mr Colligan, Seconded by Mr Christiansen, and AGREED unanimously.

REPORTS OF CONSULTATIVE COMMITTEES

WORLD BRAILLE COUNCIL

By **Dr Walter Cohen,** *Chairman*

The World Braille Council owes its establishment, its existence and its achievements to the energy, the determination and the vision of a blind man, the late Sir Clutha Mackenzie, who was also its first chairman. Sir Clutha did not seek re-election to this office in 1964 due to failing health, and it was not long after his successor took office that Sir Clutha was called to higher service, leaving a gap in the work of the Council which can never be adequately filled.

At its inception and for some years thereafter, the World Braille Council functioned under the aegis of UNESCO but when this body could no longer support its highly technical work, the council came under the wing of the World Council for the Welfare of the Blind, now being a consultative body to the W.C.W.B.

As it stands today, the Council consists of people expert in all departments of Braille, drawn from various parts of the world, based on the linguistic divisions of the world in a somewhat arbitrary manner in the opinion of the writer and with the rapid development of literature for the blind in the fast developing countries of Africa and Asia, the writer believes that the Council should be appointed by the General Assembly or by the Executive Committee of the World Council for the Welfare of the Blind and that a more scientific demarcation of regions should be undertaken if Braille systems for various language groups are to be developed and function satisfactorily.

World Braille Usage

Without doubt, the greatest contribution made by Sir Clutha Mackenzie to our field of work was his great work entitled "World Braille Usage," which, unfortunately, is now out of print. Herein Sir Clutha set out clearly the principles of Braille, the system of raised dots which is till today, in this age of space travel and other marvels, the finest system of reading and writing yet devised for the blind.

Sir Clutha had the opportunity afforded him of travelling widely throughout the world, far from his native soil of New Zealand and in the course of his travels made very important contacts with workers in welfare and matters relating to Braille. He was enabled to study Braille systems in many countries, to discuss them, and to persuade workers in this highly specialized field to conform as closely as possible to Braille principles which would enable blind readers of one language to read Braille in another language, provided, of course, that the reader was acquainted with both. Frequently, it was found that there were more than one system of Braille for a single language, and he found it no easy task to effect a compromise between the protagonists of the different systems. Nevertheless "World Braille Usage" is proof of his tact, perseverance and sticking to his principles.

It is on the basis of the principles laid down by Sir Clutha that the present Council and its very inadequate Chairman work to assist in the development of Braille systems for the languages of countries as far apart and unrelated as Western Samoa and the Ovambo language of South West Africa, where a Finnish Mission works among blind Ovambos and is establishing a school.

Technical Difficulties

Work on any Braille system, be it for a language, for music or for mathematical symbols, is a highly technical task, beset by difficulties. Funds are not available to allow for the amount of travel which was so important for the initial work of Sir Clutha. It will be readily appreciated that it is no easy task to guide an enthusiastic worker in Western Samoa by correspondence from distant South Africa. Samoan has a 17 letter alphabet, it is a language unknown to the writer—yet he must try to give guidance by mail.

Braille Music Notation presents an even more technically difficult problem. Two schools of thought exist on the best Braille Music Notation system, but the sub-committee appointed by the World Braille Council can get together once in five years owing to lack of funds to enable them to meet more frequently and yet the efforts to bring about uniformity continue. It need not be stressed how beneficial it would be for blind musicians if there were one system so that Braille music were readily interchangeable.

In this age of electronic computers and with an ever increasing interest in matters scientific (and the blind are not the least interested), it is obvious how desirable one uniform Braille system for mathematical signs and chemical symbols really is, yet our Council has been frustrated by the difficulties encountered in trying to gather information and to propound ways of bringing about such uniformity.

From the above it would seem that the World Braille Council has accomplished but little. While it is conceded that in regard to music and mathematical and chemical symbols little progress has been made, we have been able to urge compliance with the principles laid down by Sir Clutha Mackenzie in the development of Braille systems for certain languages. We believe that given the funds, we could do a great deal more by meeting our colleagues round a table and discussing technicalities which it is so impossible to do by correspondence. We have the men to do the work. We trust we may be allowed to carry out the work.

INTERNATIONAL COUNCIL OF EDUCATORS OF BLIND YOUTH

By **Mr Tore Gissler,** *Chairman*

The I.C.E.B.Y., which is the consultative committee on education for the W.C.W.B., held its fourth quinquennial conference at Perkins School for the Blind, Watertown, Massachusetts, USA, from August 20 to August 26, 1967. The proceedings of the conference have been published and are available from the Perkins School.

At Perkins the name of the organisation was changed from The International *Conference* of Educators of Blind Youth into The International *Council* of Educators of Blind Youth.

The conference was attended by 273 delegates and observers from different countries in all continents. The Principal Officers of the Conference were Dr E. J. Waterhouse, Host and Chairman, and Mr K. N. K. Jussawala, Secretary.

The themes of the three previous conferences have been general aspects on the education of blind youth (Bussum 1952 and Oslo 1957) and the education of the blind in the developing countries (Hannover 1962). Some assistance for the planning of the Perkins conference resulted from the fact that the World Council for the Welfare of the Blind General Assembly met in New York City in 1964. Attending it were a number of persons associated with the I.C.E.B.Y. or otherwise interested in educational problems. Two meetings were held in New York at this time to prepare for the 1967 Conference. It was agreed that unlike the earlier three meetings, little attention would be paid to the development of resolutions, since an ample supply of these had already been passed, many of which still awaited implementation. Instead, the main business of the Conference would be to discuss the latest techniques of teaching certain subjects and the meetings would be broken down into nine Workshops, meeting three at a time. It was also decided that the Conference should be somewhat briefer than other ones and should be confined to a week's duration.

The success of the conference depended mainly upon the ability of the nine educators who were chosen to be the Workshop leaders. These were as follows:

1. Evaluation and Assessment of Pupils, Leader : Carl J. Davis, Perkins School for the Blind
2. Daily Living and Physical Activity, Leader: W. J. J. Kooyman, Bussum, Netherlands
3. Teaching of Literacy through Braille, Leader: Dr Berthold Lowenfeld, Berkeley, California

4. Teaching of Number, Leader: Benjamin F. Smith, Perkins School for the Blind
5. Teaching of Science, Leaders: M. S. Colbourn Brown, RNIB, London; Richard C. Fletcher, Worcester, England
6. Teaching of Geography and Social Studies, Leader: T. B. Thomas, New Zealand
7. Teaching of Home Economics, Leader: Mrs Sheila Daily, Perkins School for the Blind
8. Teaching of Music, Leader: John Di Francesco, California School for the Blind
9. Teaching of Slow Learners, Leader: S. O. Myers, Condover Hall School for Blind Children with Additional Handicaps, England.

It was at these Workshop sessions that the serious work of the Conference took place. In most instances there was animated and helpful discussion in which delegates from all over the world participated.

In addition there were some General Sessions, one of which was addressed by Mr George R. Smith, instructor of mathematics at St. Paul's School (for seeing children), Concord, New Hampshire, on the Kiewit Computation Center at Dartmouth College in Hanover, New Hampshire. This paper foretold the possibility that blind children would be making use of computers in their educational programmes in the near future. The delegates also attended a demonstration of the latest technical devices at the Massachusetts Institute of Technology. The late John K. Dupress, Head of the Prosthetic and Sensory Aid Development Centre at the Institute, was in charge.

Associated with this Conference, but not strictly a part of it, was a programme of two Leadership Projects which took place during the week preceding the general meetings. One of these Leadership Projects was primarily for educators, while the other was planned for administrators. These Projects were financed largely by a grant from the United States Department of Health, Education and Welfare and partly by Perkins Trustees. Both Projects, which included approximately 75 people, joined in a meeting of the Library of Congress in Washington on Monday, August 14th. But after that the two groups separated, not getting together again until Friday when they had a full day's session in New York City at the National Society for the Prevention of Blindness. Both groups had a free day for sightseeing in New York City on the Saturday and travelled by bus to Watertown Sunday morning.

The Administrators Project included meetings at the National Institute of Health in Washington, after which they flew to Louisville, Kentucky to spend a day at the American Printing House for the Blind. In the meantime, the Educators Project included a visit to the Overbrook School for the Blind in Philadelphia, where they were able to see the fine tactual museum known as "Touch and Learn." From there they went to spend an evening in Morristown, New Jersey at the Seeing Eye, the pioneers for the training of guide dogs. They also had a day of visiting various facilities of the New Jersey Commission for the Blind, which is one of the outstanding agencies in the United States providing education for blind children in public school settings.

At the Conference, Mr Tore Gissler, director of the School for the Blind in Tomteboda, Sweden, was elected chairman for the next five years, and an invitation to meet in 1972 was accepted from the National Organization of the Blind in Spain.

The Conference appointed an Executive Committee for 1967-1972. The chief officers are : Chairman, Mr Tore Gissler, Sweden; Vice-Chairman, Don Angel Foz Tena, Spain; and Secretary, Mr Valdemar Paaske, Denmark. The full list of officers, honorary life members, and members of the executive committee is attached to this report.

I am glad to be able to report that since the Perkins conference the U.S.S.R. has joined the World Council for the Welfare of the Blind. This means that they have a right to be represented on the sub-committees of the W.C.W.B. such as the I.C.E.B.Y. This is a very happy development and quite in agreement with the wish I expressed at the termination of the Perkins days, namely that our family might grow bigger and more widespread, so that the net of members might cover all parts of the world. I have consulted with the President and the Secretary-General of the W.C.W.B. and decided to invite Dr Maria I. Zemtsova to serve on the Executive, and she has kindly accepted.

Following the New York meetings 1964, a periodical was established to be issued at approximately 6 month intervals. This periodical was originally somewhat unique in that the editor of each issue would come from a different part of the world. Mr K. N. K. Jussawala of Bombay, India, who was the first editor, selected the name for the periodical calling it The Educator. Up until 1967 the contents of these issues were mainly reprints from well-known educational magazines, but also a number of original articles appeared, some of them of very high quality. Subsequent numbers were published in Nigeria, Brazil, Spain, South Australia, Yugoslavia and Canada. At the Watertown Conference, it was decided to continue the publication of The Educator, but under the leadership of a permanent editor. Mr William T. Heisler, Director of Teacher Training at Perkins School for the Blind, was given the responsibility for the period 1967-1972. He has sent out two numbers in 1968, and one in January 1969. The subscription is $3.00 for the quinquennium. Mr Heisler is very eager to get notices and reports about events and plans in our field, such as conferences in different regions, new schools and training facitilies, production of new educational materials and good articles to be translated and published in The Educator. In the following issues he would like to see a listing of educational research or related research projects in the area of the blind, that is being done in each country. What he is trying to do is to devote a section of the publication to a listing of research projects world-wide. I herewith strongly submit to you to have your own country's organizations for or of the blind and of the teachers of the blind *make subscriptions.* If you bring together 15 or more subscriptions, this will entitle you to a summary of the contents in your own language.

During this period, on June 1, 1968, one of the greatest personalities of all times, Helen Keller, passed away. In a telegram to her family the I.C.E.B.Y. has expressed what her life and work meant to pupils and educators in schools for the blind all over the world. Her visits to our schools have given inspiration to the work with blind and deaf-blind children and created unforgettable memories.

The Director-General of UNESCO has appointed Mr N. I. Sundberg, Sweden, to the post of Programme Specialist for special education of handicapped children and youth. Mr Sundberg has asked Mr Jarvis of the W.C.W.B. in his capacity of Chairman of the Council of World Organisations Interested in the Handicapped to suggest five names of people to consult with UNESCO. I have nominated Dr Jeanne Kenmore in Paris to serve as a representative for the education of the visually handicapped.

In the period between conferences there are very limited opportunities for international action. This is mainly due to lack of financial means. If an organization wants to be active, it must have means for many services, above all for a secretariat. Since the I.C.E.B.Y. started, it has relied upon other resources than its own. It has been dependent on the resources of its chairman and the host countries of the conferences, and from financial help from other organisations such as the W.C.W.B. It has never had a real budget. To put an end to this a Finance Committee under Mr Armstrong's (Canada) leadership worked on the problems during the Perkins Conference. These are the main paragraphs of its report:

"At the outset it was decided to consider the question of an annual budget for I.C.E.B.Y. separate from that of the Quinquennial Conferences, specifically the one to be held in Madrid, Spain in 1972.

While it was believed that the chiarman would have assistance from his base of employment, it was agreed he should not be dependent on this. It was decided that an annual budget of $2000 would be our minimum objective.

It was our understanding that I.C.E.B.Y. can expect to continue to receive an annual grant of $400 from W.C.W.B. and $300 from Perkins.

We, the members of your Finance Committee, recommend :

(*a*) That each country participating in I.C.E.B.Y. be asked to contribute, annually, at least $10 per delegate to which it is entitled and that the Chairman be authorized to so notify each country or to delegate this responsibility.

(*b*) That the Chairman appoint a Finance Committee to function during the five year period of his office.

(*c*) That the Chairman act as treasurer of I.C.E.B.Y. so that he will at all times be aware of the financial situation of our organisation.

(*d*) That the Chairman keep the membership informed, through "The Educator," of the general response to the financial request suggested above.

(*e*) That the Chairman and the Finance Committee continue to seek sources of financial support for I.C.E.B.Y.

With regard to the financing of the Quinquennial Conference it was suggested that this would be done in three main ways:

(*a*) The host country will, of course, give considerable help.

(*b*) The annual budget hopefully will have at least a small surplus which will accumulate.

(*c*) Special appeals will be made to agencies, organizations, and foundations for sponsorship as for previous conferences, such appeals beginning at least three years in advance of the Conference, and preferably sooner, as some such grants may be annual, and such appeals to be made either by the Chairman or by his delegate or delegates, perhaps the Finance Committee.

It is also a definite recommendation of the Finance Committee that the Chairman of I.C.E.B.Y. should have funds available to insure that all countries be represented at our conference regardless of financial ability to send delegates, and also to enable him to secure workshop leaders or other personnel required to insure the excellence of the programme offered. The work of the Finance Committee will continue.

During the General Assembly of the WCWB in New Delhi an attempt will be made to assemble all educators in attendance and to discuss "The Educator," the financial problems, the most suitable dates for the 1972 Conference, its programme etc.

OFFICERS AND EXECUTIVE COMMITTEE 1967-1972

I. OFFICERS:

Chairman	Mr Tore Gissler,	Sweden
Vice-Chairman	Don Angel Foz Tena	Spain
Secretary	Mr Valdemar Paske	Denmark
Assistant Secretaries	Mrs Ana Maria Benard da Costa	Portugal
	Mr S. Armstrong	Canada
	Mrs D. de Gouvea Nowill	Brazil
	Mr K. N. K. Jussawala	India
	Mr M. B. Nnoma	Ghana
	Mr S. O. Myers	United Kingdom
	Dr F. Tonkovic	Yugoslavia
	Dr H. Garbe	Germany

II. HONORARY LIFE MEMBERS:

Dr G. Farrell	U.S.A.
Mr P. Henri	France
Prof Dr. Carl Strehl	Germany
Mr C. M. Waller-Zeper	Netherlands
Mr E. H. Getliff	United Kingdom
Mr B. Mökleby	Norway
Mr R. Winter	Germany
Mr J. Jarvis	United Kingdom
Dr E. J. Waterhouse	U.S.A.

III. MEMBERS OF THE EXECUTIVE COMMITTEE:

EUROPE		
Balkan	Mr M. Licina	Yogoslavia
Benelux	Mr W. J. Kooyman	Netherlands
Central	Miss G. Jahoda	Austria
Eastern	Mr S. Madej	Poland
France	Mr M. Bonhommeau	France
Germany	Dr E. Dorner	Germany
Iberia	Mr R. Gomez de la Torre	Spain
Ireland	Fr V. Spillane	Ireland
Italy	Dr E. Romagnoli	Italy
Scandinavia	Mr E. Häkkinen	Finland
United Kingdom	Mr F. H. Tooze	United Kingdom
U.S.S.R.	Dr Maria I. Zemtsova	U.S.S.R.
NEAR EAST	Mr H. Federbush-Resheff	Israel
	Mr S. T. Dajani	Jordan
	Mr A. El-Ghanim	Saudi Arabia
	Mr F. Chalati	Syria
	Mr R. Rajhi Belkhodja	Tunisia
FAR EAST	Mr C. H. Gunawardena	Ceylon
	Mr L. Advani	India
	Mr E. Jonathan	India
	Mr B. A. P. Nandagopaul	India
	Mr Yasumasa Sato	Japan
	Mr W. G. Brohier	Malaysia
AFRICA	Dr J. W. Cookey-Gam	Nigeria
	Mr T. Pauw	South Africa

OCEANIA	Mr E. B. Searle	Australia
	Mr T. V. Thomas	New Zealand
NORTH AMERICA	Fr W. Laurier	Canada
	Mr E. Peeler	U.S.A.
	Mr M. Woolly	U.S.A.
	Dr R. H. Thompson	U.S.A.
LATIN AMERICA	Mr A. Beteta Mosquers	Peru
	Mrs I. Licona	Guatemala

American Foundation for Overseas Blind	Mr E. T. Boulter
Royal Commonwealth Society for the Blind	Mr G. Salisbury
Royal National Institute for the Blind	Mr M. Colborne Brown

REPORT OF CREDENTIALS AND PROXIES COMMITTEE

8th October, 1969.

By **Mr Frank Y. Turley,** *Chairman*

Mr Turley, Chairman of the Credentials and Proxies Committee, reported the following valid Proxies:

Austria :	Mr M. Bleier and Mr A. Wurzer to Dr Geissler (German Federal Republic).
Chechoslovakia :	Mr R. Krchnak and Dr R. Tyl to Mr B. Zimin (U.S.S.R.)
Denmark :	Mr H. C. Seierup to Mr S. Jensen (Denmark).
Finland :	Mr E. Hakkinen and Mr K. Virkki to Mr S. Jensen (Denmark).
France :	Reverend Père Boury to Dr Chambet (France). Mon H. Gauvrit to Mon A. Nicolle (France). Mon L. Lecogne to Mon A. Boucharel (France).
German Federal Republic :	Dr A. Gottwald to Dr H. Geissler (German Federal Republic). Dr O. Schafer to Dr F. Sonntag (German Federal Republic).
Greece :	Mr E. Kefakis and Mr S. Michalacoplouos to Mr J. C. Colligan (U.K.)
Hungary :	Prof. T. Vas and Dr G. Korner to Mr Zimin (U.S.S.R.).
India :	Lt. G. L. Nardekar to Mrs Q. H. C. Captain (India)

Ireland : Miss B. Knox and Mr P. Lyons to Mr J. C. Colligan (U.K.).

Italy : Prof. G. Fuca to Gen. Ammannato (Italy).

Japan : Mr T. Torii
Mr S. Nakabayashi
Mr Tsujimoto
Mr Jitsumoto
to Mr H. Iwahashi (Japan).

Jordan : Mr S. T. Dajani to Mr A. M. El-Ghanim (Saudi Arabia).

Korea : Mr S. K. Nam, Mr T. Rhee and Mrs B. On Yoo to Mr E. J. Paik (Korea).

Luxemburg : Mon L. Schuller and Mlle Y. Isaac to Dr H. Geissler (German Federal Republic).

Netherlands : Mr S. E. M. Van der Klei to Mr D. H. Koster (Netherlands).

Nigeria : Mr D. O. Akinkugbe and Mr P. Graham to Dr Cookey-Gam, (Nigeria).

Norway : Mr A. Orseth to Mr R. Overvoll (Norway).

Pakistan : Begum N. Jivanji, Begum M. M. Akram and Mrs R. H. Khan to Begum Tyabji (Pakistan).

Poland : Mr K. Jaworek, Mr M. Golwala, Mr Z. Stepek and Mr D. Spychalski to Mr B. Zimin (U.S.S.R.).

Switzerland : Mr H. Bannwart to Dr H. Geissler (German Federal Republic).

U.S.A. : Mr J. F. C. Hyde to Dr M. R. Barnett (U.S.A.).

Yugoslavia : Prof. M. Mitasev to Mr I. Brasanac (Yugoslavia). Mr M. Stanisic to Prof. O. Marinkov (Yugoslavia).

The Adoption of the Report was moved by Mr F. Turley, Seconded by Mr E. M. Getliff and AGREED unanimously.

PROFESSIONAL SESSION I

Thursday morning, October 9, 1969.

COMMUNICATION IN AN AGE OF SCIENCE

Chairman : **Mr Cyril White,** *President, Dominion Association of the Blind, New Zealand*

THE BRAILLE SYSTEM : ITS PRODUCTION DISTRIBUTION AND USE

By **Mrs Dorina de Gouvea Nowill,** *President, Fundacao para o Livro do Cego no Brasil*

Three centuries after Gutemberg's discovery, Valentin Hauy, an educator, concerned with the education of blind people and deeply impressed by the tactile capacity of a blind youth, invented a way in which blind people could have access to the reading of material printed in high-relief, but that form of reading did not prove entirely satisfactory. Had Hauy gone further in his research work, he would have discovered that his blind students could perceive the final stops than they could the other Roman characters in highrelief. This process made reading possible, but only that and not writing done by the blind students themselves.

It was a French captain, Charles Barbier, who devised an appropriate method for tactile-perceived reading and writing; the perfecting of this system, however, was the work of the great Louis Braille who, in 1829, presented blind people with a process of reading and writing which made possible for them to surpass, at least in part, the barrier of the limitation of their communication with other members of their communities.

The 19th century was prodigal in the discovery of new methods of reading and writing for the blind. William Moon devised a new reading method based on the Roman alphabet; this system, however, has a great inconvenience: it cannot be hand-written by blind people and depends on a press to be produced.

In a world where graphic representation has so important a place in the communication of ideas and concepts, blind people can also count (besides Braille books) on voluntary readers, or paid ones, who will read aloud to them; more recently, thanks to the progress in electronics, they can also use talking books, on records and tapes.

In countries where talking books have not, as yet, been introduced as part of the programme for the education and social welfare of blind people, recorders have fulfilled the reading necessities of these people in all their life phases.

None of these systems, however, makes it possible for the blind to be up-to-date in everything produced in graphic form but, on the other hand, no human being, not even those who are able to read printed characters, could do it in a total and absolute way.

Blind people read Braille books by using both hands and running the tips of their fingers very lightly over the high-relief signs; they read with the tips of the fingers of one hand, changing the line with the other hand. Usually the right hand reads and the left one accompanies the beginning of a new line, thus making the reading faster and more fluent. Braille cells have a size of their own and are perceived as a whole by a person's perception area, which is localized in the fingertips of both hands. People who are born blind read more easily and with more dexterity, because of the way they use the system in the normal process of learning and because it is really a part of their perceptive life. The difficulties encountered in the mastering of the Braille system are the same ones found in learning to read and they vary with each individual, depending on their opportunities for perception development and readiness for reading.

In some cases, the psychological aspects of accepting blindness—and the Braille system as a logical consequence—have to be considered. Newspapers are seldom found in Braille print, since the slowness of the transcription process would make them outdated and un-interesting. Correspondence courses have been gaining more and more acceptance and can be efficiently taken under the Braille system. Best sellers and folk literature can also be found transcribed into Braille. Often this kind of work is found in Talking Books, in the countries where this resource already exists, enlarging the horizons of blind people and helping to keep them up-to-date in their education.

The problems of Braille transcribed sheet music have all been solved, but for minor technical difficulties ; this allows for a closer exchange among all countries, thanks to the adoption of an international code, specially of piano lesson methods, and musical works of great composers, which do not demand knowledge of another language, but only of the musical Braille code.

Use of the Braille System

This paper should have enclosed some statistical data on the existing numbers of Braille readers, but there was no way in which we could get hold of them, not even for Latin-American countries. There are no valid estimates in Latin America, on the subject, since estimates on the incidence of blindness, in those countries, are practically non-existent. This is due to various reasons : lack of uniformity in the definition of blindness; non-existence of specialized statistical commissions; and lack of financial funds for census taking, surveys and research work, as is the case in other countries.

The pressing necessity for minimum attending services, few financial resources for educational programmes and job opportunities for the visually handicapped, has taken the importance out of statistical surveys. But the data is fundamental in the planning of programmes and in the allotting of financial funds high enough to cover the accomplishment of educational and social welfare services. All professionals in this work field, in almost all Latin American countries, have been fighting for the creation of committees or other like resources which will work out estimates on the incidence of blindness and other pertinent basic information indispensable for papers such as this one. In North American countries, where the equipment, resources and programmes for visually handicapped people have arrived at an astonishingly progressive stage, statistical data indicates that approximately 45,000 people use the Braille system as a means of reading.

In his work titled "The Causes and Extent of Blindness in a Changing World," John Wilson includes Latin America in his list of the regions where incidence of blindness is very high. This, coupled with the fact that education has taken a great impulse in all Latin American countries, lead us to believe that the number of blind people who use the Braille system is increasing daily. The progress made in electronics and the books recorded on records, tapes or cassette system do not constitute a restriction phenomenon, *i.e.,* they do not cause a decrease in the demands for Braille books.

A very great number of those requiring Braille books are blind people who go to elementary school, where the learning process rests heavily in the acquisition of reading, writing and arithmetical techniques. Modern processes of teaching make an ever greater demand on varied work and texts to be examined by the children—and this is done with greater efficiency through the Braille system. High-school students have an absolute necessity of high relief material, even when they can make use of recorded material or of readers. University students, and even blind teachers, scientists and artists need the basic Braille books in their studies. It is true, of course, that the programmes for sight-utilization are being ever increasingly spread, and that many legally blind people, thanks to optical aids and enlarged-type books, can read black printed publications, but this fact does not affect the rate of those children whose only means of acquiring knowledge is the Braille system.

The incidence of blindness in old age is a confirmed fact in the countries where human life limits are longer. Afflictions typical of old age, according to John Wilson, make international statistics considerably higher; but this group, certainly due to the fact that as people get older they find it more and more difficult to master new techniques, and so find it very hard to learn the Braille system, is the one which makes less demands on high-relief literature.

We would also like to mention the cases of deaf-blind people, whose sole means of getting to know what is graphically produced in ink-print is the Braille system. Reading done through the hand alphabet is far from fulfilling the needs of this already large group of people.

Each one of the groups we mentioned would, in itself, be worth the effort of trying to raise the production of high-relief material and of making its process faster and more efficient. All facilities and processes which can, in any way, help blind people in this important sector of communication are important and necessary, but up to now the Braille system is the one which offers the best conditions, specially because it is fit for reading and writing done by blind people themselves. And, for this reason, it should be considered the most important item in the electronics studies and research work now being so thoroughly made.

Braille Production and Distribution

Braille can be manually-produced in single copies, duplicated in special machines, printed by Braille presses and, more recently, automated thanks to electronic computers.

Another way to produce Braille manually is to use the Braille typewriter. This machine is based, partly, on the structure of the common type-writer ; the paper slides on a roller, and the high-relief letters are typed by means of a mobile bed which contains six keys and a space lever. Some machines are equipped with seven keys, so as to allow blind people to read with their left hand, handling the typewriter only with their right one. Braille typewriters can be found specially in Europe and in North America ; they come in several different models, but they can only, all of them, write on one side of the paper and make single copies. These typewriters are a step ahead of the slates and styluses, since the keyboard combinations make it possible to write one letter at a time with the simultaneous pressing of the keys, while with the slate only one dot can be written at a time.

Braille transcribers need a considerable length of time to master the code, and only after two years of copying are able to write efficiently and fast enough. All over the world these volunteer or paid copyists have made an important contribution to the forming of Braille libraries. Along with the increase in the numbers of children integrated in regular schools we have had, as a consequence, many young people entering technical schools and universities and, therefore, the demands for Braille books have become more diversified. Thanks to these copyists, working individually or in associations and services, the needs of all these blind students are being met. Certain works can only be transcribed in single copies, because they deal with specialized subjects of very little demand, and which, for these reasons, are not transcribed by Braille presses.

Electric Braille typewriters have appeared more recently and are faster than the original ones, which helps to increase production of single copies. Some of the electric typewriters are equipped with a common keyboard, similar to the ones in the regular typewriters, eliminating the necessity of being familiar with the Braille system to make transcriptions in integral Braille. According to Goldish three types of these semi-automated devices are : The Tyco-Brailler, the IBM Brailler and the MIT Picture Brailler. Some countries also produce a Braille shorthand machine. The keyboard is similar to the one in the Braille writer, but the Braille comes out in paper tapes ; this equipment is highly useful to blind stenographers.

Among Braille duplicators, one of the great discoveries is, without any doubt, the thermoform. The thermoform produces permanent copies, in plastic leaves called braillon, from common Braille paper matrixes. Its working process is done through heat and vacuum and this system is only good up to 50 copies, since after this quantity, it becomes too expensive. The thermoform is very useful to copyists′ organizations, presses, special schools or specialized educational departments. But here we still have the problem Braille being written only on one side of the paper, which makes the books too thick. The thermoform can transcribe drawings, maps, charts and other high-relief material, directly from the original. Still another process of Braille reproduction is done with the Multigraph Braille Duplicator, which includes separate types for the different combinations which compose the Braille alphabet. Here the Braille text is composed in frames and can be done in any language as well as in music, mathematics, chemistry, etc. This process is very much used in schools, organizations for the blind and copyist groups, because it can produce several Braille copies for a relatively low price, and at good mechanical speed. This duplicator can be operated by either blind or sighted people.

Finally, the Braille system can also be produced by Braille Presses which, like other Presses, depend, for their functioning, on specialised equipment besides printing machines. The fundamental machines in a Braille Press are the stereotyper and the printer. Stereotypers follow the same principle as do the

Braille typewriters, with the difference that they are all electrified and have automatic devices, so as to permit greater speed in transcription. Stereotypers produce matrixes in zinc aluminum or other metalloy, and, through the interpoint system, Braille is printed on both leaf sides. Multiple copies can be made from these matrixes and, for this work it is necessary to hire well trained and qualified stereotypists—and this means stereotypists with a deep knowledge of integral Braille, abbreviation codes, composition rules, shaping, diagramming, drawing adaptation, charts, etc. A good transcriber needs at least six months of training and practice before he is ready to copy literary works in Braille but two years are necessary for a transcriber to be able to master all the difficulties in transcription, including the abbreviation codes. Scientific Braille and the special music and mathematics codes demand an even longer training period. A good stereotypist is able to produce up to two and a half corrected literary Braille matrixes per hour. Scientific, mathematics and music Braille take longer to be produced.

The training of stereotypists is a problem which affects the production of Braille books and deeply worries the directors of these Braille presses. To be a stereotypist a person has to have specialized training, and this is not a profession very sought after, in the work market. There are very few Braille Presses in all the world ; most countries have only one or two Presses, with the exception of the United States and of European countries, which possess more than one Braille Press, many of them with a large production scale.

Selection always presents a problem, due to the multiplicity and variety of works; however, blind people do not have specific necessities in what concerns literary works, but follow the same criterion of choice as do the other members of their communities, with preference for this or that work, depending on their degree of education. Even with the advent of talking books, which are a great help in the diffusion of an ever larger number of literary works among the blind, there will always be a limit to the numbers of works blind people can have access to. Almost all the more developed Braille Presses have a commission of experts, who select all the material to be transcribed, orienting themselves by the book market. One of the most serious problems deals with the time when selections are made, that is, when students get to know which books they will be needing, for almost always it is a bit too late, for while the common student can go to a book-store and purchase all the books he needs, blind students have to ask for transcriptions in a specialized library or press. And very often there will not be time enough for the transcriptions needed to be made by the Presses and by the copyists. News bulletins, and even reviews are part of this time problem, too : most countries print no daily or weekly publications in Braille, for by the time they get to the blind people, they are already out-dated. The embossing of books in Braille is a slow and lengthy process. Matrixes are made by hand : the Braillist reads the text in ink print, transcribing it into Braille, on the aluminum matrix, with the help of the stereotyper.

The making of the metal matrixes presents specific problems, as do the training and qualification of stereotypists : the more efficient and better prepared a stereotypist is, the faster his production will be and the less mistakes he will make. A good stereotypist has an average production of 5 corrected pages an hour. A work made up of 5 volumes, each with 100 pages will be ready in 100 work-hours. As has already been mentioned, it is essential that the stereotypist be familiar with the Braille alphabet and its abbreviation codes, and that he masters them thoroughly. After the matrixes are completed there are the proof-reading and matrix-correcting tasks, after which printing is begun, followed by paging and binding.

Blind people cannot buy books in common book-stores, but must get them directly from Braille Presses, or from Copyist Services or borrow them from specialized libraries. Braille libraries in most countries work as circulating libraries, and are composed of material produced by the Braille Presses and by transcribers of sole copies. These libraries are located within public libraries and in schools for the blind, and they are specially made to deal with Braille books.

In spite of the fact that most countries grant all Braille material free postage, it is not always that the circulation of this material is done efficeintly enough. One of the major distribution problems of Braille material are school-books, and this affects the majority of the blind people who use Braille : the blind students. Children attending special schools for the blind do not have this problem, since the programmes and bibliography are chosen well in advance, giving the Presses and transcribers enough time to do the work; this does not occur with blind students attending regular schools: hence the problem. Braille books being so large, a blind person could hardly have her own library at home; high-relief books are usually lent to blind people by the circulating libraries and are seldom sold, but this, for the reasons already mentioned, cannot serve as an indication that blind people are not interested in reading and do not make any use of Braille books. On the contrary, as the more specialized education for the blind develops, the greater the demand for Braille books in any country, as has already been proven.

Braille Presses' production rests heavily on text-books for elementary and high-school courses, and basic books for technical and university courses. Of course, in the countries where education for the visually handicapped has developed at a faster rate, the programmes of technical and scientific studies, as well as university curriculums can be accompanied by specialized Braille material, at least in their fundamental parts. This is one of the objectives of Braille Presses in developing countries.

Solid Braille

Studies for the production of a more durable Braille were begun 40 years ago, but it was only recently that the utilization of plastic material produced a more practical and economic process. After many years of research work, the Royal National Institute for the Blind in England perfected a method which consists in depositing and glueing (through a heat process) solid plastic dots on a thin but enduring paper surface ; a whole factory has been planned for this process, based on this method. The thickness of Braille publications produced through this method was reduced by 45%; furthermore. the dots do not flatten or deteriorate with use. Though the installation of a factory for this system would be more expensive than any other similar factory of high-relief books, it would be faster and less costly to operate. Solid Braille is produced by the pressing of soft plastic dots through a matrix plate perforated with Braille cells, over a piece of paper. The dots harden on the paper, giving the same typical sensation as the Braille reliefs. This process utilizes 28 pound Kraft paper, as opposed to the normal 80 pound paper utilized in the common Braille production. This explains the reduced size of books made with solid Braille. The perforated zinc matrixes used in the solid dots process are made in a special machine, and the press produces about 21 sections of 16 Braille pages per minute. This large production is naturally very useful in the case of big volumes, but a smaller unit could be mounted through this same process.

Automation

At this point, when the progress made in electronics makes life so much easier and computers monopolize technology in all of its aspects, specialists in the production of books for the blind are striving to find a way for automation in the making of Braille Books. Besides this, specific problems in the production of the Braille system do justify research work aiming at its automation. Automated Braille can do without the specialized personnel needed in manual production. Automation systems reduce direct costs of hand labour in a considerable way. Sighted operatives can be recruited in the common work market, needing only about two or three weeks training to start working in Braille production. Not only does high demand justify faster production, but it is also necessary to meet the needs of blind people in a shorter time. Incidentally, this factor has already been pointed out, in this paper, as one of the serious problems facing Braille production and use (namely, the slowness of the production system) and serves to demonstrate the pressing necessity of faster production processes being utilized. This aspect also presents problems for all Braille Presses, since there are times of greater demand for this or that type of book. Employees must be paid and often a greater demand for books calls for more operatives than the Press is employing at the moment. Studies made in different technological centres, specially by the IBM, have agreed on the viability of automatization for the production of Braille. A sighted keypunch operator punches the ink-print copy, letter by letter, into a set of cards, thereby producing uncontracted, computer-readable copy. The corrected deck of cards is then taken to a piece of equipment which automatically transfers the information on the cards to magnetic tape. The information on the magnetic tape is then fed into a computer programmed not only for English grade 2 Braille, but also for the insertion of Braille format directions: paragraphing, page numbering, ends of pages, and so on. The result of this operation is another magnetic tape, but this time one that is completely coded for contracted Braille, as well as embossing directions for format. The information on the second tape is then transferred to another set of cards, which are fed into a regular IBM card reader which activates an electronically-automated stereograph machine, which in turn produces the embossed plates from which we print Braille Books. For Braille automation it is necessary to consider the costs which are excessively high ; this automation could only be done through special financial fund reserves. We would also like to mention the automated Braille production centres in Germany and in England. Besides Braille automation the age of computers has presented blind people with a new profession, a new occupation : that of blind programmers for electronic computers.

LIBRARY SERVICES FOR JAPANESE BLIND

By **Mr Kazuo Honma** *The Japan Braille Library, Japan*

In this modern age, the importance of reading becomes ever more significant. As we contemplate 21st Century conditions, it is seen that world technology virtually doubles its achievements every ten years. It is through personal reading that we can hope to keep up with the fast-breaking changes, and have the individual opportunity to share in the resources of our time.

Blind people everywhere are deprived of two vital senses that sighted people take for granted. These handicaps are (1) the lack of ability to read the printed page, and (2) lack of mobility, or the freedom to walk unaided. These are age old problems that have plagued blind people throughout the history of civilization, regardless of national origin, or other social considerations. Generally speaking, however, advancement in these two problem areas have depended on technological improvements which have been first brought about to benefit sighted people.

With reference to travelling and mobility, everyone benefited from the effects of the Industrial age. The horse was replaced by the motor car, railway and bus. Then came the airplane, and even faster forms of aerial transportation are now in the offing. In any case, blind people have been advantaged together with the great majority of people who see. As for walking, however, little progress has been made by the blind man. Men without sight walk with canes, as they must have done thousands of years ago.

In terms of reading, blind people have made more progress. In 1829, Louis Braille brought the power of written communication to blind people with his wonderful system of touch-reading. It was as if a magic sun had appeared over the dark horizon shared by countless blind people. One hundred and forty years later, nearly all nations have benefited their blind citizens with the braille system. Most educational programmes have been based on his embossed-dot method. Compared to sighted reading, however, braille reading is slow and laborious. Also, it does not seem suited for those who are adventitiously blinded in middle age, or even later in life. In this classification of blind people touch reading is often difficult, and in some cases impossible.

The so-called "talking-book" has been a great plus factor, in terms of reading without physical sight. The two principal devices involve recording by means of discs, and the other is by means of magnetic tape. In both cases, the systems were made possible by electronic inventions which first benefited sighted people.

Sound-recorded literature, by disc or tape, has proven to be almost as significant to blind people as was the perfection of touch reading many years ago. The story of the "talking-book" began in the United States in the year 1931. It was in the form of recorded discs, at the old speed of 78 revolutions per minute. Later, work went on in both the United States and England, and the system was improved by the reduction of recording speed to 33 1/3 RPM, and in this instance, the sighted people benefited by a development for blind people. It was the slower-moving "talking-book" which brought the long-play musical recordings to the commercial market. American "talking-books" have subsequently been changed to even slower speeds. About ten years ago, the recordings turned at 16 2/3 RPM, and now the transition is being made to 15/16 RPM.

Sound-recorded books and magazines first appeared in Europe approximately 18 years ago. Conventional open-reel tape machines were used, and the flexibility of this standard approach permitted many blind people to be served with minimum operating costs. No elaborate record pressing plants were needed, and the tapes could be re-used almost indefinitely.

In 1957, Japan became the first country in Asia to have sound-recorded reading for the blind. Japanese leaders in the field of education and welfare had known about it for 25 years, but progress was hindered by the conventional reason of funding non-availability. The first reading on tape was done by a Christian volunteer group, which sought to operate without technical guidelines. Experience with this group enabled the staff at the Japan Braille Library to design a more efficient reading service, which gradually took form over the next three years. Today, a strict technical standard is applied in the selection of volunteer readers.

The tape library section of the Japan Braille Library has progressed remarkably during the decade just past. This rapid growth is attributed to four reasons:

1. All reading has been done by qualified volunteers. The large number of volunteer braille transcribers, which responded after the close of World War II, has provided an opportunity to get readers. Many of the transcribers became volunteer readers for the "talking-book" service after completing the six months of special training. Up to the close of last year, a total of 2,714 applications had been received from willing volunteers at our institution. It is significant to state that fully 90 per cent of that number were disqualified by voice test, or failure to complete the standard training course. A total of 365 applicants have been accepted into the reading service, and 125 readers are

active at present. Of the latter group, about 30 readers happen to possess related talents professionally, such as members of theatrical groups, radio and television announcers.

2. In 1961, Japan's "talking-book" library service was subsidized at both the Japan Braille Library and the Nippon Lighthouse, which is located in the second largest Japanese city, Osaka. Municipal authorities followed suit in the same year at both locations.

3. The Ministry of Post and Tele-communications followed with free mailing privileges for recorded literature, both to and from registered library institutions.

4. A productive electronics industry in Japan has made it possible for blind people to obtain good tape machines at reasonable cost. One company was induced to design a special playback model, which was marketed at approximately one-third of the usual tape recorder cost. The 500 machines distributed under this plan helped to popularize the idea of a reading service, among Japanese blind people, and an improved public relations progress was then started in Government circles.

With reference to the sound-recorded library itself, I may say that all literature is in two main classifications. They are (1) full-length book titles, and (2) periodicals, such as regular magazines for the sighted public, and special issues specifically edited for the interest of sightless persons. Book titles in the current index carry a variety of literature types, from history, to professional studies, to best sellers of the day. The list of titles is also representative of authors from all over the world. About ten kinds of periodicals are distributed regularly to a multitude of readers on a nation-wide basis. Our own institution loaned 210,491 reels during last year.

At our institution, we are gradually conforming to the advantages of four-track recording over the older pattern of dual track. Our standard four-track model is made by the National Electric Company, and sells for 35 US dollars. More than 1,000 of these machines have been distributed to date. We had been using the two-track method, at the conventional speed of 9.5 cps (3 3/4 ips) until I happened to visit counterpart library centres in the United States and Europe. After that, we began to contemplate the change to five-inch reels, and the slower playing speed of 4.75 cps (1 7/8 ips). This more efficient method of producing recorded books and magaiznes affords economy in terms of tape purchases, handling and storage operations, and is an advantage in postal handling due to the smaller size of the containers.

Although cassette tape recorders are very popular on the Japanese market today, it is not likely that this design will be incorporated with our sound-recording programme. The cassette model is small, and its encased tape reels are comparatively easy to operate. The popular models in Japan are all designed after the Philips patent, which was initially developed by a Netherlands concern. Two major drawbacks appear to preclude the general usage of cassette models in our library programme. Firstly, the tape units are much more expensive than an equivalent amount of open-reel tape, and too costly for our budget. Secondly, existing copying equipment could not be used in library work, and the playing time is still too short to accommodate lengthy publications conveniently.

In conclusion, I should say that our sound-recorded library programme has proven successful and popular. The three main centres are the Japan Braille Library, Nippon Lighthouse (Osaka), and the Lighthouse for the Blind (Nagoya). These tape library centres, together with seven others, now issue more units of reading material than the entire volume of 50 braille libraries lending touch reading publications. Moreover, it appears that the popularity of sound-recorded publications is increasing day by day.

I believe that a "talking-book" library system should be tax-free in all aspects, and that all costs should be borne by public interests. It is not a luxury, and I am sorry to have to say that we have thus far failed to convince our public officials of that fact in Japan. As I have previously stated, postal charges on the mailing of tape-recorded publications have been waived, we have also succeeded in obtaining a small Government subsidy, which is applied against the purchase price of our standard four-track, National tape recorder. Our present aim is to proceed along these lines, until we can say that a truly nation-wide "talking-book" service has been made available to every one of our blind citizens who desires to use it.

It is in our hope, furthermore, to have a similar state of affairs established in the neighbouring nations in the East, and with such end in view, we should like to start a modest Information Centre at our library to help supplying with necessary assistance and materials to those who would start or improve their equipment in the talking book service. Though our resources are limited, we hope to promote this objective with the support of other advanced nations in the world.

TECHNOLOGICAL ADVANCES IN COMMUNICATION FOR THE BLIND

By **Mr J. C. Swail,** *National Research Council, Canada.*

In relation to the blind, communications may mean quite different things to different people, depending on their background, interest and vocation. In its broadest possible sense it refers to anything that may assist the blind person to maintain contact with his environment. This will include not only reading but less obviously, sign reading, map reading and associated orientation, and the interpretation of gesture and expressions of his fellow beings. In other words a complete solution to the communications problem of the blind involves providing all the information normally handled by the visual sense via the remaining sensory channels. Some concept of the magnitude of the problem may be suggested by the fact that the visual system employs about one million nerve fibres to feed information to the brain, whereas the auditory sense uses about forty thousand and the tactile mode much fewer. To further complicate the problem evolution has selectively adapted each of these senses to process different forms of information and in quite different ways.

Our advance in science and technology has been so rapid and spectacular in the past several years that there seems no reason to suppose that within the foreseeable future a complete solution will not be devised for this problem and that we shall have a satisfactory substitute for vision.

One of the most exciting experiments which points in this direction is the work recently undertaken by a medical team at Cambridge, England. In this experiment, micro-electrode probes were directly implanted in the visual cortex of a blind patient. For hygienic reasons it was not possible to pass direct connections from these probes through the skin to the exterior. By connecting them to subminiature radio receivers placed directly under the skin of the forehead and actuating these by an array of external transmitters, this difficulty was avoided. Each of the transmitters, and thus each electrode, was controlled by a separate light sensor arranged in an array or matrix. In the current experiment only fifty-two electrodes were implanted ; thus under the most optimum conditions of probe placement, a very poor degree of visual resolution is possible. However, if the experiment meets the team's expectations, further such operations will be tried, in which a great many more probes will be implanted, and a device similar to a television camera will serve as the visual pickup. It has been hopefully forecast that normal reading speeds might then be achieved, and a reasonable degree of mobility attained. I would caution that many difficulties must be overcome before any such scheme comes into general use, if ever. A very serious operation is involved with still unpredictable results, and as yet very little is known of the extremely complex cross connections of the visual cortex. Although it is certainly a very exciting and inspiring experiment, it is still just that—an experiment, although it most definitely points the way to an eventual solution to the problem of blindness. One of the most competent researchers in the work of mapping and deciphering the complex interconnections of the visual cortex has stated privately that in his opinion we are still a couple of generations from having sufficient data to use the potential of this part of the brain fully. Thus for the time being, we must look for realistic solutions by feeding information to the blind person via alternate sensory channels.

Before leaving the subject of artificially induced vision, I should mention the work of several researchers who have tried to communicate information to the subject by an effect which produces light flashes if electrodes are placed on the exterior of the head, and are activated by the passage of a small electric current between them. This stimulates either the optic nerve or visual cortex directly. The effect has been known for some time and has recently been exploited in environmental sensors, in which the current is controlled by light sensors, built by Dr Armando del Camp of the University of Mexico, and several other researchers. These devices have enabled trained users to detect bright objects on the ground, the difference between light and shadow, etc. However, the effect is very much that of a shotgun, it is not possible to excite specific brain areas with external electrodes. It seems that although this mode of communicating information may have uses in very special circumstances, it is unlikely to be of much general value. It would therefore appear that at the present time we must rely on auditory and tactile stimuli as the only effective input modes to replace vision. This brings up the point that to date, much too little is known of what we may term, 'the man machine interface.' That is optimizing the machine generated auditory and tactile codes to match the needs of the human. Despite considerable psychological work on the functioning of these senses, relatively little is still known of the true nature of their operation and capabilities, and a great deal more research must be done in this area. It is a most unfortunate fact that a great deal of engineering effort has gone into the design of potentially useful sensory aids, especially in the fields of mobility and reading machines, on the erroneous assumption that the blind are so anxious to have such devices, and the materials that they would make available, that they would be willing to put forth superhuman efforts to learn to cope with any coding which happens to suit the designer or to be most feasible in a technical sense. It is also sad that the same mistakes should have been made repeatedly, due to a serious lack of adequate communication between researchers. Fortunately, the I.R.I.S. bulletins and a number of recent international conferences on sensory aids are beginning to correct this situation although much remains to be accomplished. However before much work is undertaken in the area of engineering and hardware design, a very great effort must be made to determine how such equipment may best be adapted to the requirements of the user. We must always keep in mind that the blind are consumers, just like their sighted colleagues, thus not only their capabilities but also their preferences and prejudices must be taken into account.

There are numerous examples of simple sensory aids which potentially filled a need in the life of the blind but which have failed to gain acceptance due to some almost ridiculous oversight on the part of the designer concerning some minor point of convenience or even shape. This sort of problem may be multiplied manyfold when dealing with such sophisticated devices as obstacle detectors or reading machines. We currently have the technical ability to solve most of the important problems facing the blind but we must make the funds available for the assembly and distribution of such machines, and for a concentrated attack on the question of how we may best couple these devices to their users.

Although during the past years many sensory aids have been devised which might be interpreted as coming under the heading of communications for the blind since they are designed to assist the user to keep in touch with his environment, I would prefer to omit mention of many of these and to confine the discussion to devices more directly recognizeable as communications equipment, specially reading machines. Being involved in research myself and thus aware of the technical efforts presently being expanded on the development of apparatus for the blind I have found the writing of this paper a sobering experience, as it has impressed upon me how very little new equipment is actually available to the blind individual.

True, computer based systems are in operation to translate typed information to grade two Braille in several of the major braille publishing houses but this has had very little real effect on the reader of the books produced by these establishments. It is still not possible to read one's own mail or obtain any desired book quickly. We are still mainly dependent on the voluntary readers or transcribers for most of these services.

One of the most interesting devices to actually become available is the IBM Model D Braille electric typewriter. In appearance this machine is similar in most respects to the company's ink machine. Grade one Braille can be typed by anyone familiar with a typewriter. Through use of the shift key, all possible dot combinations are available, and thus with a minimum of training a typist can be taught to produce fully contracted Braille. This will now mean that any sighted typist can produce braille material for a blind worker, and that the training of volunteer Braillists will take much less time than was necessary with conventional Braille writers. The machine also has the advantage of being capable of producing material at over twice the speed of the Braille writer and with much less physical effort. It has also been successfully linked to a computer and used to produce Braille from a punched tape input. Several other manufacturers have also designed Braille electric typewriters, but to the best of my knowledge the IBM is the only one currently in general distribution. There is still a great need for a dual machine which would make simultaneous braille and ink copies. This would permit a blind man to have access to the letters and documents being prepared in his office without separate typings.

Another very useful device has been the development of the Thermoform machine which through the use of heat and vacuum, permits inexpensive duplication of braille material from a paper. This has meant that many books and documents which have been hand transcribed may be distributed to those who require them. For purposes of convenience, reading machines have been divided into two basic categories, direct translation and recognition machines; although there is a very wide variety of design in each class, basically in the first type, the user is expected to cope with some code directly derived from the shapes of the characters being read, whereas in the second, the machine is designed to recognise the print symbols and translate this information into a code or system already known to the user. In this case the output would most likely take the form of Braille or recognizeable speech.

The oldest and still most popular form of direct translation machine is the Optophone. Originally developed in England in 1914 it consists of a row of photo-sensors arranged to look at a narrow vertical slit the height of the print character but only a fraction of the width of one symbol. Each censor is arranged to sound a tone when it is over black and to silence it when viewing white. Each sensor activates a different musical pitch or frequency. Thus a vertical riser sounds all available tones simultaneously while a horizontal stroke sounds only one. A large number of Optophones have been designed since the original with varying numbers of sensors and electronic complexity. The latest entries into this field are the Mauch Laboratories Visotoner and its tactile counterpart the Visotacter, the Lexiphone designed by Dr Beddoes of the University of British Columbia, and another tactile device designed by Dr John Linvill of Stanford University. Despite many years of experience with various forms of the Optophone and its tactile equivalent involving many well controlled test projects, very few persons have mastered the complex codes sufficiently to be of much practical value. A few have attained reading speeds of about twenty-five words per minute. These people would appear to be especially gifted individuals. In an attempt to discover how many blind people might find a use for the Optophone, the Hadley School for the Blind of Winnetka, Illinois, is offering a correspondence course in the use of the Isotoner. It is still too early to assess the results of this project. The Visotacter is simply a tactile version of the Optophone in which the audible tones are replaced by tactile stimuli fed to various fingers of the user's hand. In my view, it may serve a useful function for the deaf blind.

A great deal of preliminary thought and experiment concerning acceptable audible codes has gone into the design of the Lexiphone. The photo-sensor array consists of a row of fifty units as opposed to six to eleven in the previous Optophone designs. A rather complex integrating circuit produces only one tone at a time and its frequency is controlled by all of the activated sensors combined. Training programmes with the Lexiphone have indicated a much higher learning rate and greater reading speeds than with earlier Optophones. However, it is still unlikely that reading speeds exceeding fifty words per minute will be achieved with field models, allowing for hand tracking of the print and line changes. Although this would be acceptable to many individuals for their personal correspondence it would still be much too slow for coping with long articles or with large quantities of business mail or documents.

Dr Linvill's device is not quite in the Optophone class as it employs a large array of photocells arranged in a matrix and a corresponding matrix of tactile stimulators. It is designed to display a tactile facsimile of several print characters at a time and may just possibly lead to slightly higher reading rates than the previously discussed devices, although it is much too early to make any valid predictions. The foregoing leads to the conclusion that for a busy person who is dependent on reading, the recognition machine offers the only realistic solution to his problem. The simplest approach to the recognition machine now under development is the Mauch Laboratories Cognodicter. This device employs a hand-tracked probe, similar to the Visotacter, but containing a more elaborate array of photosensors. These are arranged in such a manner as to be capable of recognising all alpha-numeric characters in common type fonts. Spoken letters and numbers are stored on magnetic tape on a continuously rotating drum, and when a symbol is deciphered by the circuitry it is selected from the drum and heard from the machine's loudspeaker. Thus a spelled-speech output is obtained. Allowing for hand tracking and line changes, word rates of between seventy and a hundred words per minute are predicted. However, this is still below the requirements for busy professionals and for them more elegant solutions must be found.

For these people, the computer offers the obvious solution. For this purpose there are at least three possible sources of input material :

(*a*) Punched or coded magnetic tapes used in the publishing industry for the setting of type. This would only be of value for current books and periodicals where such tapes may still be available. This has already been tried experimentally as a joint project between the Massachusetts Institute of Technology, the American Printing House for the Blind, and the Library of Congress, to prepare a novel in Braille for library distribution.

(*b*) Input could also be typed into the computer system by a typist untrained in the needs of the blind.

(*c*) Most promising, one of the high speed optical scanners now just becoming available would be used to convert printed material into machine language.

Once the material has been transformed into machine language by one of the foregoing methods, there is no problem in writing the appropriate computer programmes to convert it to grade two Braille, or to speech if a recorded dictionary is stored in the computer's memory. Where spoken output is chosen, the dictionary would most likely be in the form of time-compressed speech ; that is, words from which pauses and redundancies have been removed artificially, thus allowing spoken rates of between two and three hundred words per minute. Where Braille is the chosen output, it may be produced either by a simple modification to the machine's standard printer, or by a device such as the MIT high-speed Braille embosser.

Although such equipment is very expensive, the time to produce a page of material is so short that the actual economics becomes quite attractive. Such equipment would be located either in a central library facility, or time could be purchased from an industrial computer facility, depending on the needs of the particular area.

Two quite different types of service will be required : long articles will be mailed to the central library facility and returned either in Braille or on magnetic tape; and, for the busy professional, a desk top terminal, connected to the facility via telephone lines, will be employed for shorter but urgently needed data. In the latter case, a simple photo pickup such as that used in the Cognodicter will feed the material to the centre, and an electrically operated Braille writer or a tape recorder will store the returned translated information. Although desk top terminals may seem quite a luxury, they are becoming prevalent in many areas of modern business and it should soon be much cheaper to use such methods than to hire a sighted reader.

The spoken output from such computers is unlikely to replace the live reader in the talking book programme, as it is likely to have a very monotonous tone, quite adequate for essential work but no replacement for the human voice in pleasure reading.

If I have seemed to stress the problems of the blind professional it is only because so many more blind persons are now entering university and subsequently the professional fields. The amount of reading necessary in any of the professions is becoming a problem for the sighted, and thus is extremely critical for the blind worker.

Another class of device which may become important is a class of machines being developed in various major laboratories with the objective of reducing the storage space required for Braille material. Rather than storing Braille in the normal way, it is recorded either on punched paper or high-density magnetic tape. These tapes are fed through a simple translating machine to actuate any one of a number of proposed tactile stimulators. To the best of my knowledge, none of these systems has as yet reached the field of evaluation stage, but if they prove successful they would reduce the storage space for Braille manyfold and greatly raise its durability.

In summary, although the blind are still dependent on the old standbys, published Braille, talking books, and the volunteer, our technology has advanced to the point where a reasonable expenditure of funds will enable the blind to be almost completely freed in the area of reading, which in most cases of employment is the most pressing need. Already the school system of Atlanta, Georgia, has provided time and the facilities in their computer centre so that blind children attending the regular schools may obtain their texts in Braille with very little delay. This seems to point the way to the future where many such facilities will be available to all who require them.

REPORTS OF REGIONAL COMMITTEES

Thursday afternoon, October 9, 1969.

COMMITTEE ON AFRICAN AFFAIRS

By **Dr J. W. Cookey-Gam,** *Chairman*

Since the first report in April, 1967, no formal meetings of the Committee have taken place but member countries have been in constant touch with the Secretariat and in this regard I am most indebted to Kenya, South Africa, and Tunisia in particular.

Membership

When the Committee was inaugurated in 1964, there were four member-countries but I am pleased to report a membership of seven to date, namely, South Africa, Kenya, Tunisia, Ghana, Sudan, Ethiopia and Nigeria. Increase in membership will depend directly on increase in number of African countries on the World Council for the Welfare of the Blind which in turn will depend on two factors, *viz :*

(*a*) Provision in the W.C.W.B. Constitution for reduced annual subscriptions for countries with population below Ten million and

(*b*) a definite effort to stimulate Blind Welfare Services in the French-Speaking African countries. France and Tunisia can do a lot in this connection and I would suggest that the *SECOND AFRICAN CONFERENCE ON WORK FOR THE BLIND should be held in TUNISIA in 1971.*

Activities

It has been rather difficult to get regular supply of information about activities in member-countries. There are three possibilities of meeting this need :

(*i*) Regular exchange of annual reports etc. between member countries.

(*ii*) Introduction of a Continental News Letter on Services for the Blind and related matters. This will be on the agenda of a meeting of the Committee in New Delhi.

(*iii*) An opportunity for the Chairman to visit member-countries once in five years to obtain first-hand knowledge of conditions and problems existing ; this should be sponsored jointly by the W.C.W.B. and the member-country of the Committee running the Secretariat.

Prevention of Blindness : As one would expect, member-countries have shown considerable interest and concern in this aspect of our work. In Kenya for instance, the main expansion in the last five years has been in the field of prevention and treatment. Mobile Eye Clinics have grown from one in 1964 to four in 1968. The shortage of Ophthalmologists is a very serious problem. I appreciate that this is a world-wide problem but perhaps the W.C.W.B. may wish to establish Two Fellowships a year in the next ten years to help the developing countries.

Education : Open Education continues to expand and has now formed an integral part of the education system of most African countries. This system of education is now well entrenched in Ethiopia, Uganda, Tanzania, and Nigeria.

In seven countries there are now about twenty-two Residential Schools at least one of which is a full-secondary school. University education has not been neglected and figures reaching me indicate that about four blind persons have already graduated.

It is known that about five Braille Printing Presses now operate (South Africa, Tunisia, Kenya, Ethiopia) and one each in the process of being established in Nigeria and Tanzania.

Vocational Training : Because the majority of the adult blind live in rural areas, the consensus of opinion among African countries is that emphasis should be on rural training. The Royal Commonwealth Society for the Blind blazed the trail in this field of training and the results have been most encouraging and have shown that this is a realistic approach to the problem of unemployment in countries with dominantly agricultural economies. In five countries there are at least eight agricultural training centres.

Prior to the experiment in agricultural training, basketry, weaving, carpet and rug making, leather work etc. were all that were available. There are over fifteen such vocational training centres and these complement the agricultural training centres. It is clear that these crafts cannot provide adequate sustenance for the blind craftsman especially as he has to compete with local manufacturers and local importers of manufactured goods. Most centres, therefore, combine agricultural training and handicraft with emphasis on one or the other depending on whether it is a rural or urban area.

Quite recently some countries have ventured into the field of industry and the best quoted example is the Umbrella Factory in Addis Ababa which employs about 183 disabled persons about 53 of whom are blind. I believe that this type of sheltered employment will go a very long way in providing employment even in the developing countries. It calls for effective feasibility survey, co-operation between Government and Industrialists and the assistance of organisations like the ILO. Given effective agricultural employment and a well organised integration into industry, the traditional crafts as a source of livelihood for the handicapped will disappear.

Conferences: Following a resolution at the First African Conference on Work for the Blind held in Lagos, Nigeria in 1966, the East African Regional Committee was formed and had its, first meeting from October 18th-October 24th, 1968 in Addis Ababa. Six African countries attended and issues on almost all aspects of service to the blind were discussed. The AFOB and the R.C.S.B. sponsored the Conference.

From the 21st-31st January, 1969 an East African Conference on the Education of the Blind was held at the LIMURU Conference Centre. Mr William Heisler of Perkins was the main lecturer, assisted by Mr D. Bryan Douglas, the R.C.S.B. Educational Adviser for the Blind in Uganda, and Visiting Government Specialists.

COMMITTEE ON ASIAN AFFAIRS

By **Mr H. Iwahashi,** *Chairman*

As the Chairman of the Standing Committee on Asian Affairs, it is a great honour for me to submit this report on the situation of Asia to the World Assembly of the W.C.W.B. As you know, Mr Kingsley Dassanaike, the former Chairman of this Committee retired last year from the chairmanship which was succeeded by Mrs H.L. Lee of Malaysia. She convened several meetings in between the sessions of the Third Asian Conference on Work for the Blind held in Manila and achieved admirable results. But unfortunately she resigned from the service for personal reasons in November, last year and I was suddenly requested by Mr Boulter, President of our Council to serve as the Chairman of the Committee in addition to the duty as Vice-President of the Council. The situation was so urgent that I had to accept his request on condition that the tenure should be until the General Assembly in New Delhi. Consequently, what I state in this report is primarily related to the situation since December, last year, and the situation before that time is summarized from material contained in the Progress Reports submitted by the fifteen countries to the Asian Conference in Manila.

The Third Asian Conference on Work for the Blind was sponsored by the A.F.O.B., R.C.S.B. and W.C.W.B. with the full co-operation of the Republic of Philippines during the period of six days from August 26th to 31st, last year. In this conference the various problems such as those of integrated education, vocational training, agricultural training, evaluation and adjustment, orientation and mobility training, factory for the blind and so forth were discussed under a well-co-ordinated team work and leadership. Delegates came from fifteen countries in Asia. The Progress Reports which describe how the 'Asian Plan' was realized in each country with mutual help between the related countries as well as the assistance of the A.F.O.B. and R.C.S.B. strongly impressed and inspired all the participants with the consciousness of a new era dawning upon Asia. An example indicative of such progress was a Progress Report from the country of Nepal from which nothing had been heard before.

In parallel with the Asian Conference, we held meetings of the Asian Committee several times. Besides the members of the Committee, representatives of all the countries participating in the Conference were invited. Thus the meetings became a very significant opportunity to explain the activities of the W.C.W.B., and to encourage the non-member countries to join W.C.W.B. and the Asian Committee. Our Chairman Mrs Lee, Dr Rajendra T. Vyas and Capt. H.J.M. Desai displayed such remarkable activities that Singapore came to declare herself to become a Representative Member, and the Republic of China (Taiwan) an Associate Member. This was really a great pleasure and a very satisfactory result for all of us who had been earnestly wishing the increase of the member countries for these ten years. Furthermore, on the last day of the Asian Conference we could make the Conference adopt a resolution (Resolution No. X, Regional Co-ordination and Co-operation) which includes seventeen problems confronting us. After taking the chairmanship, I started to make every effort to solve the problems included in the Resolution. Dr Vyas readily accepted the vice-chairmanship as a helpful assistant to me. Mr Ronald Chandran-Dudley of Singapore was ready to give his co-operation in acting as the editor of our magazine 'Asian Blind' whose publication had been discontinued and concurrently he is in charge of public relations.

The major problems contained in the Resolution together with my efforts for their solution can be summarized as follows :

1. Formulation of the Rules Governing the Activities of the Asian Committee

.Rules have been framed by our Vice-Chairman Dr Vyas for the procedure and conduct of our Committee. This means that the Committee has ome to have a newly constructed railroad on which the Committee can develop its activities.

2. Interchange of Information and Co-operation between the Oceanian and the Asian Region

In compliance with a resolution (Resolution No. X, Item 2) which provides that countries in Oceania be included in and encouraged to actively participate in the work of the Committee, I conducted correspondence with Mr Frank Y. Turley, Australia and Mr E. W. Christiansen, New Zealand, both of whom willingly accepted our request. Thus, in these meetings of the Asian Committee those representing the two regions are expected to draw up the rules co-ordinating the activities of the two regions and to discuss various problems such as the education of the blind, vocational problems, the employment of the blind in both urban and rural areas, rehabilitation work, a programme of exchanging instructors and blind students to study or observe institutions in other countries and so forth. I cannot foretell what fruits will be brone by our discussions, but we may fully expect that some type of mutual help will be started in an immense area covering the Asian and the Oceanian region.

3. Problem around the Formation of a National Body

This problem is a phenomenon universal to any region, but particularly observed in the Asian region where various types of organizations and agencies of and for the blind exist. These organizations and agencies sometimes cause quarrels among themselves or are in a state of irreconcilable discord, although sometimes yield good results through mutual help. In view of this tendency, we have adopted a resolution to encourage each country in Asia to form a national body co-ordinating the activities of various organizations serving the blind in co-operation with the government of the country. Because this is virtually a most difficult task, the Chairman has written a letter to the Minister in charge of blind welfare or the education of the blind through the good offices of the foreign ambassadors or ministers in Japan, requesting them for their co-operation with the formation of a national body.

4. Encouraging Participation in the W.C.W.B. as Representative Members or Associate Members

In Asia, Representative Members to the W.C.W.B. are, at present, India, Pakistan, Ceylon, Malaysia, Singapore, Korea and Japan, and Associate Members are Hong Kong and the Republic of China. In Asia where about two-thirds of the blind population in the world exists, such a figure reveals a hopeless situation. Accordingly, with the hope of increasing the number of the member countries as many as possible, I have written to the Republic of Philippines and Thailand which were formerly member countries and later withdrew from the membership because of the financial difficulty and encouraged them to come back to the W.C..B. Furthermore, I have emphasized that if it is difficult for them to become Representative Members due to the high amount of the membership fees, the first thing to do is to participate as Associate Members, and, in this way, the stringent financial circumstances of the W.C.W.B. will be mitigated a great deal. As a result, six Associate Members, the same figure as that of Representative Members have participated from Japan in our Council. We have also received an application for associate membership from Mr Brohier, St. Nicholas School and Home for the Blind in Malaysia. I feel it an honour to introduce him to you today.

I would like to offer before you two problems representing an earnest hope of the Asian countries. One problem is that, in Asia where people suffer destitution, many of the countries are unable to seek membership in the W.C.W.B., although well aware of its necessity. As requested by a resolution adopted at the Manila Conference, we especially wish that special provision will be made to accept even a lesser number of Representative Members than that fixed in proportion to the general population of a country. One of the resolutions (Resolution No. X, Item 9) states as follows: "The W.C.W.B. be moved to consider the feasibility of reducing the fees for membership or change its constitution to accept lesser numbers of representatives than entitled in the case of countries which cannot afford payment of all membership fees."

Another problem is to consider the feasibility of the principle of "One Country One Vote" which affects the right of voting. This problem was also presented to the Manila Conference in the hope that the opinions of a country with lesser numbers of representatives should be respected after adequate consideration for the matter mentioned in the preceding paragraph.

5. Re-publication of the Magazine "Asian Blind"

The magazine "Asian Blind" whose publication had been suspended for the past five years was resumed by the new editor, Mr Dudley. The whole expense for printing and publishing this magazine has been borne by Japan. I heartily hope that the publication of this magazine will continue to be a channel to promote a better mutual understanding among Asian countries and sometimes to appeal to the world about the real circumstances of Asia, and that it will be a good consultant to any person or country suffering from any problem involved in blindness. Here I would like to pay a high tribute of respect to Mr Dudley and the Japanese Committee for the Welfare of the Blind, Inc., which has rendered financial assistance to this project.

6. Programme of Exchanging Welfare Workers, Instructors and Blind Students

It is a vitally important step for developing Asia that, with the mutual interchange of information and co-operation, the countries in Asia widen their knowledge, apply themselves to their studies, and stimulate and help each other. Following the resolution of the Manila Conference, the Rehabilitation Institute, Committee for the Blind in Taiwan and the Nippon Lighthouse have reached an agreement regarding the exchange of one instructor at least for the duration of one month every year. This year, one Japanese instructor was sent to Taiwan, while in January next year one from Taiwan is to come to Japan. Such a programme is being prepared to be undertaken respectively by India and other countries. There is much to be expected from these movements.

7. Programme of Exchanging Aids and Appliances for the Blind

I have entrusted Mr Suresh C. Ahuja, India, with the implementation of this programme which is of great importance. As you know, with respect to aids and appliances for the blind and braille paper, etc., most of the Asian countries except a few are dependent upon foreign countries. However, such countries as India, Malaysia, the Republic of China and Japan have come to be able to manufactute these aids and appliances in their own countries and, furthermore, to have the productive capacity for exporting the surplus to other countries. This is pleasing news indeed. At this time it is suggested that the Asian countries which have hitherto been so dependent upon other regions should compile a list of aids and appliances for the blind produced in all of the Asian countries, and co-operate to fill each other's needs. It will not be long before an investigation report will be made by Mr Ahuja and distributed to us.

8. Holding the Asian Seminar

As you know, the Asian Conference on Work for the Blind has regularly taken place at intervals of five years. The period of five years is so long that a mere dependence on correspondence is not sufficient at all to have a good understanding of the rapidly changing aspects of the welfare services and education for the blind in the Asian region. Taking this point into account, the Asian Committee is making preparations to sponsor at least one seminar in the period between the Asian Conferences, with a view to studying such important problems as an integrated educational programme, occupations for the blind, agricultural training, the employment of the blind and so on.

I have so far reported the major activities of the Asian Committee around the Resolutions of the Manila Conference. Now, as the Chairman, I would like to explain briefly a direction toward which Asia is to proceed in the future as well as the procedures for developing its activities.

As you are aware, Asia with a huge population is suffering from dire poverty and illiteracy in spite of its vast land and abunddant natural resources. Tiding over such difficulties and barriers, however, all of us who wish to implement our Asian Plan are approaching our goal with steady steps after the Second Asian Conference in Kuala Lumpur. Moreover, we are firmly determined to remove the stigma of poverty, illiteracy and "blindness is equal to beggary" which is apt to attach to blindness in any Asian country. If our determination has been realized, it will be commemorative of this General Assembly of the W.C.W.B. which is taking place for the first time in Asia. There is a saying, "Heaven helps those who help themselves" which I like very much, and I believe this saying is the most necessary warning to Asia today. If we do not stand up by ourselves with courage and determination but only try to be dependent upon others from the beginning, nothing will be accomplished. In this sense, my suggestion was that each of us should take the initiative in making a donation for the benefit of the Asian Committee and of Asia. A donation of 100,000 yen (about 278 US dollars) made by the Nippon Lighthouse was immediately followed by India with a donation of 1,000 rupees (about 133 US dollars). The total sum is trivial, but I do hope that through such a deed each of the Asian countries will have a pleasing experience of independence and responsibility.

Next, I would like to point out the significance of developing a high level of professional skills and knowledge through technical assistance and guidance. Education problems, especially an integrated programme, vocational training and employment of the blind, international interchange of information and co-operation, the development of aids and appliances for the blind and a co-operative attitude of each government toward blindness; any of these cannot be given priority and is equally essential. Among these, integrated education, and vocational training and placement particularly require a high standard of professional skills and knowledge. In this respect, we will exert all the endeavours in our power to be independent, but with regard to the aspect of professional skills and knowledge, assistance and guidance from advanced countries are ardently desired for.

In the Republic of China an integrated educational programme gives us an inspiring example which has, under the guidance of Dr. Stanley E. Bourgeault, A.F.O.B., overcome various obstacles and bad conditions, and has achieved a wonderful success for a span of two years. The Orientation and Mobility Training Course and the Vocational Training Course which was started in Kuala Lumpur last year under the sponsorship of the A.F.O.B. have won an amazing success, giving an epoch-making incentive to the welfare, educational and vocational programme for the blind in each of the Asian Countries. Major Bridges' assiduous visits to each Asian country have made a great contribution to the exchange of information and the training of the leading personnel in the field. An agricultural training programme in Taman Harapan, Malaysia is under the guidance of Mr R. A. Babonau, R.C.S.B., assured of a successful result which is comparable to that in India.

From a few examples mentioned above, you will easily understand that a high level of technical guidance is more effective than economic assistance in developing potential resources, and so becomes a much better investment.

In this connection I feel very strongly that, especially in Asia, any conference should not be directed toward merely producing many impractical resolutions but adopting fewer resolutions leading to the feasible solution of the confronted problems. I would like to emphasize again that, as for a direction for the future, our endeavours toward self-help and the introduction of a high level of professional skills and knowledge are of crucial importance.

In India, a large Asian country with the oldest and glorious civilization in the world, the General Assembly of the W.C.W.B. is being held for the first time in the Asian region. It is one of the highest honours conferred upon us Asian people just like the Olympic Games held in Tokyo. I think Asia should go forward with this honour and pleasure in mind.

To conclude this report, I would like to express my wholehearted gratitude to the international agencies such as the A.F.O.B., R.C.S.B. and the United Nations and its specialized agencies. At the same time I sincerely pray that the sponsoring country, India, may be honoured with God's blessing.

COMMITTEE ON EUROPEAN AFFAIRS

By **Mr H. C. Seierup,** *Chairman*

A great deal points to the fact that the distance between the individual member country and the World Council has grown so big that the feeling of fellowship seems to have weakened somewhat. In Europe we note that smaller groups of member countries have formed together in small communities. This goes for the Scandinavian countries, a number of East-European countries and now for the Common Market countries, the so-called six, too. This development is not a hindrance to a world-wide organization, on the contrary, I am regarding this development as being a step on the way to the great community.

The Regional Committees then will be the next step towards the World Council. Seen in this perspective, our organization is only one out of numerous attempts to unite a divided world. Men are strong only if they believe in one another, and any attempt, however small it may be, in order to establish an organization, also contributes in creating confidence between human beings.

The European Regional Committee was founded in 1964. It was in Paris, where—as known—also stood the cradle of the "Blind Welfare" itself, at any rate as far as Western Europe is concerned. Later on we succeeded in uniting almost all European countries from the Mediterranean to the Arctic Ocean, and from Russia to Ireland.

In 1965 West-Germany arranged for a Seminar about the problems of the newly blinded, and a Symposium dealing with the possibilities of employment for the blind took place in 1967 in the German Democratic Republic. Switzerland invited in 1966 and England in 1968 for the General Assembly to be held in their respective countries. In all these cases, board and lodging for the participants have been paid by the inviting countries. Without this hospitality the arrangements could hardly have been carried through.

In connection with these arrangements we have discussed various questions of common interest in several committee meetings. I have mentioned the problems with regard to newly blinded and the possibilities for employment, but subjects as social politics, technical developments, problems of educational character, traffic problems and many other things have also been discussed. Schopenhauer said "fate is shuffling the cards, but we are playing them." Therefore, it is necessary for all of us to learn from each other, so that we can play our cards as good as possible, in other words make the most of our possibilities in every respect. According to the sceptic, the blind are unable to do anything, but to tell the real truth, many are doing quite a deal after all.

The European Committee has, and I feel almost inclined to say, terminated the first phase of its existence. Collaboration is established, the organization created, but then the second phase follows. Now the organization must work, now the trees, which are going to bear the fruits, must be planted.

A lot more would be well-off, if none had it better. The social politics must be given first priority, among others because we all have many who owing to bad health are unable to do any kind of work. One can die without money, but not live, so for this reason too the social politics must be of utmost importance to us.

In these days, where man has succeeded in conquering the moon, the technical science is developing so fast that it must hold possibilities also for us. This applies to education and employment as well as to technical aids and appliances whether the question is about supplying books or making preparation to facilitate traffic problems, and, one fine day it may perhaps result in getting one's eyesight restored. We can believe in these possibilities or be doubtful, but at any rate it will be wise to move with the development. We must be engaged. If we choose to look upon life as a spectator only, we must not be surprised that it looks like a theatre, but it is more than that, or ought to be so.

Finally, we will have to realize that anyway more advanced countries have reached a position, where also the sparetime has its problems. Social politics is no longer a question of money only, not even a question of money and work only, but to a high degree also a question of care for the individual and that in many ways.

All these questions are in the essence universal and belong in reality to the W.C.W.B., but the development throughout the world has not been moving equally and has not been following the same course. Therefore, it is quite natural that regionally too one is engaged in universal problems.

The European Committee will meet next summer at the General Assembly in Copenhagen, where it is the intention to deal with a number of the aforementioned problems.

This will be the last time, I am going to report to the European Regional Committee, because I had to withdraw from all positions of trust in the Danish Association of the Blind when taking over the post as director for the State Institute for the blind and partially sighted. Therefore, I avail myself of the opportunity to thank all, with whom I have had the pleasure to work together. It has meant great enrichment to me to take part in the international co-operation, and I hope that it may be possible somehow to keep alive the personal contacts established through so many years. I wish for the international co-operation, expressed through the W.C.W.B., luck and success in future. International co-operation is also in 1969 a new thing we must get accustomed to. It is, probably, not quite wrong to say that human beings are defending their habits more vigorously than their intentions, but just for this reason there will be need for a conscious effort in order to create new habits, new ideas, and new willingness for co-operation across all frontiers.

COMMITTEE ON INTER-AMERICAN AFFAIRS

By **Mrs Dorina de Gouvea Nowill,** *Chairman*

On the ninth and thirteenth days of May 1966 at the City Hotel, in Buenos Aires, Argentina, where was held the First Congress of Braille Printing Houses of the Spanish Speaking Countries, and taking advantage of the Congress, meetings of the Committee on Inter-American Affairs of the W.C.W.B. were held.

The following members of the Committee on Inter-American Affairs were present: Dr Robert Barnett, from the United States of America; Mr Hector Cadavid-Alvarez, from Colombia (Committee Chairman); Mrs Dorina de Gouvea Nowill, from Brazil (Committee's General Secretary); Dr Luiz M. Saenz, from Peru; Mr Alberto Santander, from Bolivia; Mr Manuel Rodrigues Cardenas, from Venezuela.

Also were present Mrs Maria Antonieta de Taeschler and Mr Rolando Venegas N. from the Latin American Office of American Foundation for Overseas Blind, in Chile.

Also were present at the third meeting of the Committee a very large group of participants of the First Congress of Braille Printing Houses of Spanish Speaking Countries, including Uruguay, Argentina, Colombia, Peru, Mexico, El Salvador, United States of America, Guatemala, Chile, Equador, Espanha, Venezuela, Paraguay and Brazil. During the meeting Mr Hector Cadavid, Committee Chairman, announced that this was an informal meeting for the purpose of explaining to all present what the W.C.W.B. is and which are the requirements for a country to become a member. An article about the W.C.W.B. written by Dr Robert Barnett was read in Spanish language and then Dr Barnett explained that the Council supports itself exclusively with the fees that are paid by the member countries. Then a large number of questions about the matter were presented by all the participants.

During the holding of the fourth meeting the following topics were presented by the Committee Chairman for discussion:

1. Consideration of the Resolution adopted by the Inter-American Conference on Work for the Blind that was convened in Guatemala in 1961, and of the Resolution adopted by the General Assembly of the W.C.W.B. held in New York in 1964.
2. Consideration of the best way to maintain permanent contact among the Committee members for the purpose of improving services for the blind.
3. Consideration of the best way to circulate the Resolutions of the W.C.W.B. and of the Congress that is now being held in Buenos Aires.
4. Consideration of the best way to ensure admission of more Latin American countries to the W.C.W.B.
5. Consideration of a programme for the Prevention of Blindness.

After the discussion on the related topics the following resolutions were adopted:

1. To maintain a periodical Latin American Bulletin in Spanish with news on the activities of persons connected with the field of education and rehabilitation of blind, news of general interest on the field activities, works

done in the different countries in education and rehabilitation of the blind as well as information on the convening of regional and national meetings about the countries which are not members of the W.C.W.B.

2. The Latin American Bulletin will be distributed with the translated copy into Spanish language of the W.C.W.B.'s News Letter.
3. The translation into Spanish language of the W.C.W.B's News Letter will be done by Dr Luiz Saenz from Peru, who offered himself to translate and send the translation to the Committee's General Secretary in Sao Paulo-Brazil for issue and distribution.
4. According to what was related by Dr Robert Barnett, that the Committee can dispose funds in order to make possible these activities, Mr Cadavid will have to write to the General Secretary of the W.C.W.B. requesting that the money be directly sent to the Committee Secretary in Sao Paulo.
5. Mrs Dorina de Gouvea Nowill from Brazil and General Secretary of the Committee will write to the different countries requesting news related to the blind persons.

Following the two meetings in Buenos Aires in 1966, the General Secretary of the Committee on Inter-American Affairs wrote to the W.C.W.B.'s President, Mr Eric T. Boulter requesting the money to cover the publication in mimeographed process and mailing of the W.C.W.B. News Letter into Spanish language with the Latin American Bulletin also in Spanish. At the same time the General Secretary issued a circular letter to a large number of persons who work with the blind in Latin America asking about events and news in the field.

Since that time, it can be reported as follows:

1. Mr Eric T. Boulter, W.C.W.B.'s President, became interested in providing funds for the Spanish issue of W.C.W.B.'s News Letter. These funds were allocated and made it possible to publish News Letter numbers 19, 20, 21, 22 and 23 and also three numbers of the Latin American Bulletin.
2. Dr Luiz Saenz from Peru gave his effective co-operation translating into Spanish language all the numbers of W.C.W.B.'s News Letters which were distributed.
3. The General Secretary of the Committee also with the co-operation of the Foundation of Book for the Blind in Brazil was able to publish in mimeographed process the numbers 19, 20, 21, 22 and 23 of the W.C.W.B.'s News Letter in Spanish and the 1st, 2nd, 3rd Latin American Bulletin which were mailed.
4. At the right time the complete report of expenses and activities was sent to the W.C.W.B.'s President.

During the Meeting of W.C.W.B.'s Executive Committee, held during the seventeenth and twenty-first of April 1967, in Belgrade, Yugoslavia, an oral report on the activities of the Committee on Inter-American Affairs, was presented by its General Secretary.

During the fifth to the ninth day of May, 1969 at the Foundation of Book for the Blind in Brazil was held the Meeting of Braille Press Directors from Latin American countries. The Meeting was sponsored by the Ministry of Education from Brazil, American Foundation for Overseas Blind and Foundation of Book for the Blind in Brazil and attended by directors of Printing Houses in Latin America from Chile, Brazil, Argentina, Mexico, Uruguay and Colombia. The Meeting had the Special Participation of Mr Alex H. Townsend, Co-ordinator of Regional Operations from the American Foundation for Overseas Blind. Among the important resolutions taken at the Meeting one of them must be emphasized here: the creation of the Association of the Ibero American Braille Presses Directors (ADEVIA) for the purpose of improving the production and distribution of books for visually handicapped persons. The report of the Meeting was already published by the Foundation of the Book for the Blind in Brazil and distributed throughout the Ibero American countries.

Sao Paulo, August 20, 1969.

PROFESSIONAL SESSION 2 **Friday morning, October 10, 1969.**

PREPARING THE BLIND TO LIVE IN AN AGE OF SCIENCE

Chairman: **Mrs P. Tiruchelvam,** *Vice-President, National Council for the Deaf and the Blind, Ceylon*

THE BLIND CHILD IN AN AGE OF SCIENCE

By **Mr Lal Advani,** *Department of Social Welfare, Government of India, New Delhi*

Introduction

Literature is a mirror reflecting the values, beliefs and the way of living adopted by a society. Some understanding of society's attitudes towards the blind could, therefore, be gleaned by a study of blindness in literature. Such a study suggests that although blind persons constitute less than 1 per cent of the population, they have received disproportionate attention by many a modern and ancient writer.

Blind children have, for centuries, been the subject of philosophical and scientific speculation. Many issues have agitated the minds of educators and psychologists. Some of these issues like the controversy over the primacy of visual or haptic space or the question posed by Molyneaux in the 18th century "will a man born blind and made to see at maturity be able to identify visually a sphere and cube which are familiar haptically ?" have remained unresolved despite spectacular advances in opthalmology which have made restoration of sight at maturity possible in certain instances.

Some cases of restoration of vision at maturity do, however, seem to confirm the differences between haptic and visual concepts of space. The middle course provided by Kant's doctrine of *a priori* nature of space and time, although resolving the dilemma of the primacy of senses by transcending it, has yet to be empirically supported or demolished.

One could justifiably ask, why has blindness remained an enigma? The answer is by no means easy. The richness of cognitive experience through the visual modality is unmatched by information received through the other senses. Sight is a relational sense par excellence. Although at first sight the limitations of blindness may appear obvious, research over the years has disclosed new areas of impairment attributable to the loss of vision. Thus, the effects of blindness are pervasive, extending to many functions of the organism. Cutsforth goes to the extent of suggesting that the entire personality is affected. Small wonder therefore that blindness, particularly when it occurs early in life, has attracted the attention of educators, scientists and philosophers.

Man's reaction to blindness has frequently been puerile displaying a lack of appreciation of detail characteristic of the child's stage of concept formation. This is clear from the class characteristics attributed to blind children.

Society has both idolized and rejected the blind. Blindness has been regarded as the most crippling condition and at the same time we have tenaciously believed in the theory of compensation of the residual senses. In many instances, it was this compensation which was believed to be responsible for the outstanding achievements of blind men and women. Such contradictory reactions underline our ignorance of the influence of blindness on the human organism.

It is clear, however, that our attitudes to blindness are the product of the totality of the cultural milieu in which we live. Two aspects in particular exercise a potent influence:—

(*i*) Our religious beliefs.
(*ii*) Developments in science and technology.

Time was when blind children were denied the right to live. The growing influence of religions saw the advent of asylums for the blind. To developments in science and technology goes the credit for inaugurating the era of rehabilitation.

The main purpose of this paper is to discuss briefly how developments in the physical, biological and social sciences could afford the blind child an opportunity of developing and demonstrating his potential and thus gradually altering his social image. We should also consider some of the challenges and hopes of the rapidly changing scene.

Major Effects of Early Blindness

In trying to understand the blind child, the cardinal principle to be borne in mind is that he is first a child and then blind. This implies that like other children, he needs parental love and a sense of security for his physical, mental, social and emotional development. He must learn in order to cope with the demands of his environment. Blindness makes this process more difficult. An understanding of the major effects of blindness is, therefore, of great importance.

Incomplete as our understanding is at present, blindness tends to impose limitations on the child in the following areas:—

1. In the absence of visual incentives, serious impairment of vision restricts the child's range of experiences.

In consequence, his conceptual development is retarded or warped, giving rise to such phenomena as verbalism.

2. Development of spatial concepts is seriously limited, making it more difficult for the child to orient himself in space and acquire confidence in movement.
3. It necessitates alteration of educational media and materials.
4. It gives rise to reversible, functional and educational retardation.
5. By impoverishing early perceptual learning, it hampers later perceptual and intellective skills.
6. Loss of vision adversely influences performance on complex manual operations.
7. By diminishing inter-facilitation of concepts across the sense modalities, it influences mental synthesis of information.

Let us turn to a consideration of how some of the major effects of early blindness could be overcome and the role of science and technology in this task.

Counteracting the Effects of Blindness

Progress in science and technology is of particular significance to the blind child because it helps him enrich his experience and overcome some of the effects of sensory deprivation. This will be evident from a perfunctory glance at the history of the education of the blind. An epoch-making event like the invention and universal acceptance of Braille was the consequence of a better understanding of the psychology of touch.

It began to be realised that the raised dot was more distinct to touch than the raised line. The subsequent development of Braille Writing Machines, Mathematical Appliances, Vocational Aids and home-making devices, all demonstrate the contribution of engineering to the task of making life richer and happier for the blind child.

While the blind child has profited greatly from advances in various branches of science, perhaps he has derived the greatest advantages from the spirit of inquiry promoted by the scientific age. The guide-dog movement and the emergence of the long-cane technique are notable examples of simple ways of helping the blind child overcome one of his most serious limitations.

Models of animals, aeroplanes, fire engines, ships and the widening range of objects accessible to the ordinary child by sight help develop in the blind child accurate concepts. Plastic maps bring to his nimble fingers valuable information about his physical environment. These are but a few instances of how the spirit of inquiry combined with development of new materials has enriched the life of the blind child. Many and varied are the products of science and technology touching vitally on the most intimate aspects of the life of the blind child. Some of these are:—

1. *The Talking-Book*

In a world where the body of knowledge is expanding at a fantastic rate, it becomes necessary for a blind child to learn to read as fast as possible. The recorded tape has opened new horizons. With the presentation of compressed and accelerated speech on the tape, the blind child may in future be able to read at over 200 words a minute and therefore cope more effectively with the demands of education and perhaps function at the same level as his age peers.

2. *New Ways of Braille Production*

(*i*) Computerized Braille holds out promise of eliminating the chronic and acute shortage of Braille books—an event of paramount importance for developing countries.

(*ii*) Wide acceptance of solid dot Braille may well reduce the bulk of Braille books.

(*iii*) Even simple duplicating processes are of great importance to blind children in the developing countries.

3. *Guidance Devices*

The field of electronics has made a peculiar and valuable contribution. Will it be too ambitious to expect that the next decade or two may bring the electronic guidance devices within the reach of the average blind child, relieving him of dependence on others to a large extent ?

Search for a Sight Substitute

So strong is the urge for an effective sight substitute that search for it has been one of the major objectives of the education of the blind and allied research. This search seems to have taken three main forms:—

1. Intensive development of residual sense modalities.
2. Discovery of new electronic aids.
3. Artificial stimulation of the brain.

Literature concerning the education of the blind is full of references to the need for paying special attention to the development of touch, smell, hearing, taste and the kinaesthetic sense to compensate, at least in part, for the loss of vision. The controversy over the sensory compensation of the blind has led to considerable research. At present differences in residual functioning between the blind and the sighted can be explained on the basis of differential attention, learning or both.

Attempts to find an instrument capable of translating the printed word into suitable auditory signals have been under way for over half a century. It now seems possible that a reading machine, with a memory of nearly ten thousand words, may be perfected and put to use in libraries for the blind. The emergence of this possibility gives an entirely new dimension to our approach to the problems of the blind child. The development of an electronic light indicator, the electronic audible ball and the like will all assist in the social integration of the blind child.

Preliminary experiments with electrically stimulating appropriate sensory areas in the human cortex have pointed to the possibility of engendering visual imagery without the intervention of the physical eye. Although the experiment is in the initial stages and many problems remain to be solved, at a time when hardly a day passes without reports of organ transplants appearing in the Press, it stirs the imagination of the blind and their workers.

The Role of Education

Research findings support the view that the average blind child functions at a retarded level as compared with sighted children of comparable chronological and mental age. This difference tends to disappear with age. It is evident, therefore, that poverty of experience arising from the limitations of blindness is the causative factor.

It should be the task of education to remove this deficiency. While a great deal has been done in this direction by progressive schools throughout the world, a great deal remains to be done. Perhaps the most effective attack on this problem could be made through carefully choosing teachers of the blind, paying them adequate remuneration and developing realistic and broad-based curricula for their preparation.

Advances in Optics

With modern medical advances, we are having more and more children with partial vision. Until recently, these children were condemned to read with their fingers but developments in optics leading to the advent of low-vision aids have revolutionized the education of partially-sighted children. In fact, many children with very low vision could read large print which is also a product of modern technology.

Some Economic Issues

Automation of industry has brought about radical changes in production techniques and recruitment policies. Although, at first sight, they may suggest a reduction in employment opportunities for the blind, the contrary is in fact the case. Automation has created many repetitive operations. It was pointed out earlier that the loss of vision adversely influences performance of complex tasks. This has been borne out by experience which seems to show that blind persons do much better on repetitive operations. In many cases, the production of a blind person on such tasks exceeds that of a sighted counterpart of comparable age and attainments. The growth of repetitive operation in industry is, therefore, likely to open more avenues of employment for the blind.

Blindness has for long been a serious handicap. The blind child cannot look to the future with equanimity unless he is assured of a reasonable chance of securing remunerative work on the completion of his education and training. The social status of an individual is intimately linked with the type of work he undertakes.

Once again, technology has come to the aid of the blind by widening the range of occupations which he can practise. Examples are some of the new occupations like X-Ray plate washing and Computer programming.

Some Socio-Psychological Issues

Most blind children encounter one of the following characteristic parental attitudes:—

(*i*) Over-protection
(*ii*) Open or disguised rejection
(*iii*) Open or disguised denial of the disability.

Every child reacts to parental attitudes. The blind child is no exception. But since the blind child encounters negative attitudes not only in his parents but in his entire social milieu, he is more prone to emotional maladjustment—a fact established by modern behavioural research.

Non-acceptance of his handicap by parents and peers interferes with the growth of a sense of personal worth which is crucial for his mental health.

How can science and technology help in resolving the social and psychological problems of the blind child? A cursory look seems to suggest that sharpening of the intellect does not necessarily bring about radical changes in our total personality which is the product of sub-conscious learning from early childhood. Many of the negative attitudes have become a part of our cultural heritage and cannot be easily eliminated. There is, however, no room for despair. With our present-day powerful media of communication like radio, television, film and the press, it should be possible to continually demonstrate the potentialities of the blind child to the public at large. With the emergence of communication satellites, inter-change of information and ideas between developed and the developing countries will be easier even in this field in the years to come.

A culture is a complex entity having its source in the values, beliefs, modes and style of living of a given people. Our attitudes are the result of long experience in our cultural environment. In other words, continued exposure to widely held attitudes tends to be sub-consciously learnt. If this is a reasonable hypothesis, continued exposure of the public at large to a demonstration of the potentialities of the blind should yield the desired results.

Rapid change is probably the most outstanding characteristic of our scientific age. Every child must learn to adapt to the changing world. The task is made more difficult by blindness because of the need to adjust to the changing environment adapted to the needs of those whose cognitive experience is richer and qualitatively different. This is one of the greatest challenges for the blind child.

It has already been shown that science and technology profoundly influence the education and social life of the blind. The blind child of today who lives in an exciting world of rapid change must face some of the following challenges inherent in the development of science and technology:—

1. Medical advances are changing the character of the blind population. We are having more and more blind children with concomitant disabilities. It is far more difficult for such a child to learn to cope with his physical and social environment. The need of such a child to have better educational techniques and appliances will be much greater.

2. A blind child seeks to overcome the loss of vision by developing his residual senses. While the invention of new devices widens his horizons, it also necessitates different patterns of sense training. For instance, a Braille reader has to develop the sensitivity of his fingers to a high level whereas a blind child wishing to depend largely on talking-books, requires a different type of training. Similarly, when reading machines are perfected, a blind child depending on them, will have to get used to a different type of listening.

3. With the growing automation of industry and rapid changes in production techniques, the blind child has to acquire more basic skills in order to fit into the economic life of the community.

4. With the inauguration of massive public education programmes, the blind child must live up to the image of an independent, self-respecting and contributing member of the community.

Some Challenges for Professional Workers

1. In a period of rapid and radical change, the educator must continually review and refine his tools and techniques. He must develop unusual flexibility.
2. Educators of the blind must transcend their traditional insularity and begin to take greater interest in other branches of special education so that they could deal more effectively with the increasing number of multiple-handicapped blind children.
3. Since early blindness has for long been an enigma, psychologists must undertake intensive research to understand the nature of the limitations of this ancient disability.
4. Some of the aids like the guidance devices and reading machines which appear on the threshold must be perfected in the light of the needs of blind children.
5. The final goal of rehabilitation is to help the blind child develop his potential to the optimum extent and integrate him into the social and economic life of his community. Since this is an interdisciplinary process, it is necessary for persons belonging to various professions like medicine, education, psychology, social work, engineering and the like to have a better understanding of the needs and potentialities of the blind child. They should also learn to co-operate in the task of developing programmes and services to meet their needs.

Conclusion

Science and technology have already made very valuable contributions to the education, training and rehabilitation of the blind. Exciting possibilities lie ahead, but in an age which, in less than three decades has witnessed the splitting of the atom and the voyage to the moon and is determined to explore the limitless expanse of the universe, no valid prediction of the future course of developments appears feasible.

In common with other disabled children, the blind child idolizes the norms of the sighted. What is, therefore, more gratifying to him than the prospect, however dim, of a greater measure of equality with those whose activities he has always emulated ? What is more thrilling than the possibility, however remote, of achieving greater independence, in travel and reading ?

The tantalising promise of the future must, of course, be viewed with cautious optimism. The reality of tomorrow may be different from the experiments of today. Every new dimension in the life of the blind child makes fresh demands on his skill, imagination and resourcefulness in adjustment. These demands must be met with courage and confidence by the blind child in the firm belief that he can count on the unstinting help, devotion, dynamism, the spirit of reciprocity and organisational acumen of every discipline concerned with his welfare.

THE BLIND COLLEGE STUDENT

By **Dr Horst Geissler,** *Vice-President, Deutscher Blindenverband, German Federal Republic*

It was an honour for me to accept your invitation to present a paper on the Blind College Student. This subject involves some difficulties, however, as "college education" means different things in different countries. In some cases, college is the final part of the high school education and precedes the university studies. In other cases, college education is the initial part of the university studies. In any case, however, it means a period of studies between the school and the university. Consequently, it would seem justified to approach this problem by only considering the paths leading to academic studies, regardless of whether the educational stage of the college is ascribed, in individual countries, to the school or to the university.

This report is based on documents on file in the central archives for blind welfare in Marburg and on the information we received from various countries in response to our inquiries. My survey may be incomplete and may even contain some errors or misunderstandings. Should you notice any errors, I would appreciate it greatly if you would draw our attention to them so that we may be able to give correct answers to any future inquiries. We always try to give information as precisely as possible and I hope that this survey is as accurate as it can be under the given circumstances.

You will certainly excuse me if I pay more attention to the Institution of the Deutsche Blindenstudienanstalt in Marburg, of which I am the Director, simply because I know it best. Nonetheless, I should like to use it as an example and not as a model as I am aware that many Institutions in other countries also do excellent educational work which enables the graduates to finish their University studies with outstanding success. For blind persons having the required intellectual capacity it is most important to have the opportunity to receive an academic education which is appropriate to the given capacities and inclinations since satisfaction in professional life is more important for a blind person than it generally is for a sighted person, and the blind person's efficiency is all the higher, the better his abilities have been trained. Thus, it is not only a human, but also an economic commandment to promote as far as possible the professional education of the blind. This should be kept in mind particularly in those countries where the blind do not as yet have access to University Education. I am certain that those delegates will share this view who come from countries in which it is possible for the blind to receive such an education and, subsequently, to enter a profession appropriate to this education.

Regarding the facilities for higher education for the blind we may divide the various countries into six categories:

I. Countries providing educational facilities which entitle their graduates to take up studies at a College or University.

II. Countries providing educational facilities which either lead to an Intermediate Leaving Certificate or entitle their graduates to begin studies at a professional school or college.

III. Countries in which "integrated education" is conducted from the beginning of the elementary school throughout the secondary school.

IV. Countries in which the blind receive their primary education principally in schools for the blind after which the most gifted transfer to regular secondary schools for the sighted, but are actively cared for and assisted by their former school for the blind or by the central Organisations of and for the blind. In some cases, the students and their teachers, now having blind persons in their classes, receive advice from the staff of the former school for the blind on all special problems so that the blind are generally able to keep up with their sighted class-mates.

V. In many countries—after completing the elementary school for the blind—boys and girls transfer to a regular school for sighted children and receive no further assistance from an Institution or Organisation for the blind. They are then dependent upon the assistance of their family or voluntary helpers.

VI. Countries which offer no higher educational opportunities at all to blind children. A small number of the blind there have taken their studies in foreign countries.

I. The first group includes the Federal Republic of Germany (West Germany), the Democratic Republic of Germany (Eastern Germany), India, Ireland, Japan, Rumania, South Africa, the United Kingdom and the United States of America.

1. The **Deutsche Blindenstudienanstalt** is a centre of education and rehabilitation for blind children whose intellectual capabilities are above average, and for those professional blind who lost their sight as adults. It was founded in 1916 to give those veterans who lost their sight during the first world war and wanted to complete their secondary education or to begin

a college education, all of the necessary help and assistance needed during their university training and in their professional placement. The object and goal of this Institution has always been to aid the professional blind as thoroughly as possible in attaining a complete integration into professional, cultural and social life. The Institution was founded through the initiative of the Association for the Intellectual Blind in Germany, an organization which had originated in Marburg in 1915 through the efforts of Carl Strehl. He had been commissioned to conduct courses for war-blinded veterans at the University of Marburg Eye Clinic. From October 1916 until July 1965 he was also the Director of the Blindenstudienanstalt.

The major task of the Institution was "the creation of a Braille library of scientific literature" in order to supply the students and university graduates with the necessary literature. The academic library for the blind has approximately 50,000 Braille volumes in all branches of knowledge, in science, instructive literature and fiction, and music notes and maps. Every year the Institute's Braille publishing department brings out a great number of books of both native and foreign authors, text books, technical books, law texts in loose-leaf form as well as professional and instructive periodicals and entertaining magazines in Braille.

The Carl Strehl School is the core of the entire complex of this Institution and consists of the private continuating secondary school, the one year secondary commercial school and the two year commercial trade school for the blind and the partially sighted. All of the school departments have been granted governmental certification and the graduates receive either a secondary school diploma or a commercial school leaving certificate equal to those granted at the other schools in the country. In 1962 the school departments received recognition as schools of particular pedagogical character by the Hessian Minister for Education and Public Instruction.

In addition to the Director of the school there are at present 12 full-time teachers and about 13 part-time teachers employed at the school.

The continuation high school accepts gifted pupils after 6 years of elementary school or special schooling for the blind, or after promotion to the seventh grade of a secondary school. After 4 school years they may continue on to training in administrative work or in the commercial or technical branches. On the other hand, should they be especially gifted they can take the secondary school diploma examinations and thus be able to begin their studies at a University. The high school now has more than 100 pupils.

The technical basic training courses for the blind (exercises in orientation, typing on a normal typewriter, reading and writing normal and shorthand Braille, operation of the technical aids and machines for the blind) are run parallel to the schooling as the need may be, and last one year. Following this comes the occupational training or reschooling for those rehabilitating, and in some cases attendance at the secondary school.

In order to provide the pupils with technical aids, a technical department has been created in which all kinds of technical aids are developed and manufactured. These aids for the blind can also be obtained by all blind persons and organisations, even in foreign countries.

The Carl Strehl School has at its disposal a language teaching laboratory, a modern swimming pool for beginners and a gymnasium as well as an outside physical training area. To keep constant check on the health of the pupils, specialists, school and practical doctors are available. Courses in orthopaedic gymnastics are also held regularly.

There are many paths to a professional occupation open to the blind graduates of these schools. They are able to follow a normal course of study at a university just like their sighted classmates and they take the same examinations. Only in the case of the technical conditions underlying the tests and written home-work an additional period of time may be allowed if needed.

The University of Marburg with its special arrangements for the blind is not the only University suited for the blind, but also a number of other Universities, colleges and academies. At present there are approximately 80 blind persons studying at Universities in West Germany and in West Berlin.

Today there are many blind employed successfully as college teachers in the various Faculties, as theologists, High School teachers, in adult education, as private teachers and as teachers for the blind, as judges, district attorneys and lawyers, in Civil Service and in business and industry. There are also a few blind mathematicians and physicists active as teachers and in industry as programmers.

Even some doctors and chemists who first became blind in adult life have been able to carry on with their occupation in a few cases.

2. German Democratic Republic (East Germany)

A joint school made up of an elementary school for the blind and an extension secondary school for visually handicapped pupils exists at Königs Wusterhausen near Berlin. In the grammar school department the blind and the amblyopic students have their lessons in common except in chemistry and art history. The blind pupils receive additional lessons in geography. The extension secondary school leads to the School Leaving Examination. Graduates are entitled to begin studies at any University in the country.

3. India

Of the 100 schools for the blind in India, six have facilities for secondary education. Students graduated from these schools are admitted to colleges and universities. Most of the blind students who want to go to college receive their education in secondary schools for the sighted. As a matter of fact more than 300 blind children are students at regular schools and colleges. Integrated education is becoming increasingly more popular in India. Several Universities grant special concessions to blind students such as exemption from tuition and examination fees, preference in admission to the dormitories and by providing "readers" and "writers" mainly at examination time.

4. Ireland

Both schools for the blind in Dublin have Post Primary Courses during which the students follow a programme which leads to the Intermediate and Leaving Certificate Examinations. A Leaving Certificate with two honours is the key to a University.

5. Japan

The compulsory education includes 6 years of primary school followed by 3 years of junior High School. Then the gifted students may attend a regular senior High School. 22 schools out of 75 have these regular courses for those who want to receive further education at a university. The leaving certificate entitles the student to take the University entrance examination during which qualified help in the form of teachers for the blind and Braille librarians are at his disposal. Up to the present, about 150 students have taken the University entrance examinations at 29 Universities. With the exception of the National University in Tokyo no other State University admits blind students. The students have to attend one of the many private colleges or universities. Most of the blind students in Japan become teachers for the blind, social workers, missionaries or journalists.

The following reasons are the basis for the refusal to allow blind students to study at the other Universities:

(*a*) Aids and equipment designed especially for the blind are not available and there is no one to lead them from one lecture room to another;

(*b*) Special methods must be used in tests and examinations;

(*c*) The blind student hinders the instruction;

(*d*) Problems arise in natural science courses and in physical training.

6. Rumania

In 1958 a special high school for the blind was opened in Cluj, which also offers the possibility of instruction through correspondence courses. Admittance is granted after an entrance examination; at the conclusion of studies there is a final examination which is necessary to take the University entrance examination. On principle all of the Universities are open to blind students. The following subjects are preferred: philosophy, political science, history, psychology, law, music, education.

7. South Africa

The Worcester School for the Blind has a high school with a leaving certificate leading to matriculation at a University in addition to an elementary school for the blind. Graduates of this school may study at all of the colleges and Universities in South Africa. Up to now the following courses of study have been preferred: law, social sciences, pedagogics and music. There is as yet no integrated education of the blind in South Africa. Blind students are not admitted to regular high schools for the sighted.

8. United Kingdom and Scotland

The Worcester College for the Blind (for boys) and the Chorleywood College (for girls) admit blind children at the age of 11 years. The two grammar schools are affiliated with the Royal National Institute for the Blind and are very similar to the German Grammar school in their structure and methods. Graduates of these schools may begin their studies at a University.

For the Scottish, the Craigmillar School in Edinburgh provides High School education which qualifies the students for University life.

9. United States of America

Gifted blind children may attend the junior and senior High School of the Perkins School in Watertown and may then enroll in the regular colleges and universities. Perkins itself has a teacher's college for teachers of the blind.

As the trend toward integration of blind children into the local schools for sighted children has developed rapidly in the USA, residential schools are turning their attention ever more to those blind children who are multipley handicapped. The current number of blind students in attendance at regular high schools, colleges and universities is estimated to be about 2,000.

In all of those countries having their own high schools for the blind but excepting South Africa, there are also a great number of students attending the normal high schools where they are able to follow the lessons with the private help of their families, their teachers and their classmates, and with the help of tape recorders and other technical aids and are thus able to pass the various required final examinations leading to matriculation.

II. The second group of countries providing special facilities for the intermediate education of the blind and qualifying the students for admittance to certain special academies such as Conservatories and the like, includes for example Norway, Spain, U.S.S.R., Czechoslovakia and Turkey.

1. Norway

The Huseby Offentlige Schole for Blinde in Oslo has a continuation school for gifted pupils, graduates of which may attend the public colleges and universities. There are only a few blind University graduates in Norway and all of them studied at normal schools.

2. Spain

All of the schools for the blind in Spain are run by the Organizacion Nacional de Ciegos. The highly gifted pupils of these schools are assembled at a continuation school in Madrid, the Immaculada Conception, girls at the age of 13 and boys at the age of 15, and graduate from here with the State School Certificate or with a diploma as music teacher. Since blind pupils are not allowed to enroll in normal schools they have to attend the high school for the blind in Madrid. The colleges and universities are, however, open to the blind. The Organizacion Nacional de Ciegos makes special grants so that the blind University students can live in the Senior Colleges. It also assists them by transcribing books and other texts into Braille or by recording them on tape. In 1965 there were 30 blind students at Spanish Universities, seven of them were female. The majority of the blind University graduates are employed later within the O.N.C.E. as teachers of the blind, administrative workers and the like.

3. U. S. S. R.

There are many schools for the blind which have continuation departments—intermediate schools. Compulsory education covers 11 years of schooling, however, the graduate of the intermediate school is generally about 19 years old after finishing school. He may then study at any academy, college or University.

4. Czechoslovakia

In 1961, an intermediate school for the blind with a boarding school was opened in Prague with all of the qualifications for preparing the pupils for university studies and it grants a high school diploma. Students at the Music School for the Blind in Prague receive additional general education here in addition to their technical musical training.

In the other socialist countries, **Bulgaria, Yugoslavia, Poland,** and **Hungary,** gifted blind graduates of the elementary schools for the blind may transfer to normal "intermediate schools." In Bulgaria as well as in **Iran** the blind often prepare themselves for the University at evening high schools. They are then admitted to all of the academies, colleges and universities. In Poland, there are approximately 40 blind University students. The blind in these countries prefer as a rule courses in pedagogics for the special schools, law, economics and philology.

5. Turkey

All of the schools for the blind in Turkey have intermediate classes. Integrated education is receiving a strong emphasis currently. Blind pupils attend the high schools for the sighted, but thus far only a modest number have realised this opportunity. A few blind can be found at the Universities.

6. Special departments for music

Some of the high schools for the **Japanese** blind also have music departments which prepare the pupil for further studies at a conservatory or at a university. There is a similar department at the continuation school for the blind in **Madrid** where the blind may study for the Music Teacher's Diploma. Graduation from the Music School for the Blind in **Prague** entitles one to practice as a music teacher.

III. In the third group of countries integrated education from the beginning of elementary school onward is carried out primarily in **Ecuador, Columbia, Turkey,** the **USA** and in some of the *developing countries* where education for the blind is just beginning. This system has certain advantages since the blind pupils who transfer to a secondary school for the sighted do not have the adaptive difficulties the children have who leave the seclusion of the resident schools for the blind. They are still dependent upon the assistance of voluntary or paid helpers, upon the aid of their parents, teachers and classmates. They also have no great difficulties in the transition from the secondary school to the college or university.

IV. There are many countries in which the blind children receive their elementary education in special schools for the blind and upon graduation the gifted may go to a normal secondary school for the sighted since there are no further possibilities of training in special schools for the blind in the country. In many cases their prior school or the central organizations for the blind aid and assist them intensively afterward. In **Ethiopia,** for example, all of the blind students are drawn together in one normal secondary school where they have a special room for studying set aside for them. The Haile Selassie I Foundation grants as many scholarships as it can to the pupils or students so that they are able to retain paid readers.

In **Canada,** secondary school pupils and students at the University are supported financially and otherwise by the Canadian National Institute for the Blind. Almost all of the Canadian Universities grant them exemption from tuition fees.

In **Cyprus,** the gifted graduates of the Saint Barnabas School for the Blind in Nicosia go to a secondary school in the city and remain living in the residential home at the school for the blind where they retain all of the special help so that they can successfully conclude their schooling. They may then continue their studies at a normal college or university.

In **Italy,** the blind pupils also go to regular grammar schools, but normally may remain living at the residential school for the blind where they receive all of the necessary help. Most of them major in pedagogics and become teachers at normal schools and at schools for the blind.

The case is the same in **New Zealand.** Most of the blind secondary school pupils remain living at the residential school. Here, and in **Holland,** they continue to receive aid and assistance from the staff of their previous schools and receive private lessons in the evening from special tutors. The same is true for the schools for the blind in **Israel** and **Sweden.** The school in Tomteboda assists its former pupils now at secondary schools or at a university by sending teachers for the blind to these schools where they give special instruction. It also furnishes the necessary class materials in Braille or by means of tape recordings.

In some States of the **USA** so called itinerant teachers visit the high schools where blind students are taught in normal classes giving them special lessons and advising their regular teachers.

In **Belgium** and **Poland** the secondary school pupils and the University students receive the necessary texts either in Braille or on tape recordings as well as scholarships and subsidies from the Institutions and Organisations for the blind.

V. In those countries where the schools for the blind are not able to afford such an active assistance the blind have to overcome the difficulties present with the help of their family and their friends. Many of them go to a special grammar school for the blind in a foreign country speaking the same language. Thus there has always been a number of students from **Austria** and **Switzerland** studying at the Institute in Marburg and often at a number of German Universities.

VI. There are still some countries in which the education and welfare of the blind are so far behind the times that there are no possibilities whatever of the blind attaining a higher education of any kind. The developing countries in the Far East, in Africa and in South America belong to this category. By means of private initiative a few blind individuals have gone to foreign countries in order to receive a higher education. This opens a ray of hope that they may perhaps be able to contribute to the beginning of a programme to develop possibilities for establishing educational systems for the blind in their countries similar to the ones in the more highly developed countries.

As this survey has demonstrated, many countries have insufficient educational facilities for blind children whose intellectual capacities would justify a University education. This is understandable in those cases where the educational programmes in general are such that even those persons not handicapped do not have much chance of attaining an education. Nevertheless, everything possible should be done so that blind persons in particular have such a chance, since it is often the case that they can only produce relatively modest accomplishments in the less demanding occupations because of their handicap.

Apart from this consideration, the conception of an unrestricted human right to receive an education is asserting itself more and more. This claim has in fact been codified partly thus far, but has not been accepted and observed everywhere. To establish this claim for the blind — it would seem so to me — would be a legitimate task for the World Council for the Welfare of the Blind.

And finally we should not neglect the fact that the future shall make ever greater demands upon men so that all of the educational facilities available must be utilized if the human race is to meet these demands. This is also true for the blind in order to prevent a reoccuring isolation of them. The success of the blind professional people in many countries proves that the doubt and hesitation still reigning in many places are fully unfounded. Thus there is no cause to prevent the blind from utilizing the possibilities inherent in a university education. However, this assumes that the gifted blind receive the necessary aid until they are ready to matriculate at the University of their choice.

THE ADJUSTMENT OF THE BLIND ADULT

By **Mr Hernando Pradilla Cobos,** *Director, National Institute for the Blind, Colombia*

Introduction

Distinguished Colleagues: The Programme Committee of this Honorable Assembly, whose theme is "The Blind in an Age of Science," has honoured me by requesting that I present this paper. I do not pretend to do a pure scientific study of Maladjustment, nor of its evolutionary processes and inherent or consequential problems, nor even of all its causes and solutions. I want only to analyze one cause of maladjustment in the blind adult and suggest one solution. It is possible that in orienting my paper in this manner, I am not fulfilling the assignment presented me, but I am sure that I am facing one of the most definitive, most important, most transcendental questions of those relative to the adjustment of the blind adult.

Actual Situation of the Blind Adult

For all of us who, in one form or another, have some connection with the prevention of blindness and the restoration of sight or work with the blind of the world, the growing number of blind people with which the world has to deal, and its rapid and disproportionate increase, is profoundly disturbing. But there is something else, something which stuns us and which causes us a great anxiety to do something immediately and efficiently to totally remedy this painful situation, and that is the aberrant state of illiteracy, lack of preparation, dependency, misery, dissatisfaction and inproductivity in which one finds the overwhelming majority of blind adults in every continent—even in countries with the greatest progress in the work with the blind where one finds a very satisfactory level of social, economic and cultural integration. Much progress has been made in the last ten years, but it is also certain that the demands of the modern life have increased in a much larger proportion and that every day they become more complex.

If we accept the estimate that 90% of all blind persons are older than 17 years, and taking into account other factors, we can affirm that the main problem lies among adults, who in some way will have to assume very soon, have now assumed, or had assumed responsibilities of distinctive types when they were sighted or after the onset of blindness. All of them have to compete for a life which is dignified and satisfying. But are they prepared for it, or are they enjoying the necessary opportunities to capacitate them for this competition?

I am convinced that the large majority of blind adults in the world are illiterate, incapacitated, dependent, live miserably, are dissatisfied with themselves, do not produce that which they could produce had they enjoyed an opportunity to be born or reborn as active members and co-participants of an amazingly progressive civilization. This in spite of the efficient, thorough, dedicated labour of organizations such as the World Council for the Welfare of the Blind, the American Foundation for Overseas Blind, other entities national and international, and the specialized organizations of the United Nations.

But daily life, experience and investigation have demonstrated to us that the blind person, adequately formed, is capable of effectively competing in this age.

Thus we have in front of us the enormous challenge of how to help the millions of blind persons to help themselves in order to enjoy satisfying lives, integrated and dignified, in an epoch such as ours.

What the Blind Adult Expects of Himself and for Himself

The individual, who is congenitally or adventitious blind in spite of race, creed, past or present culture or political position, additional limitations or psychological condition, is above all a person with equal rights and to share opportunities to share equal responsibilities. We all know this. Because of the person he is, the blind adult knows that he has a mission to fulfil in life and that he must prepare himself to fulfil it, and he expects from him whatever is necessary to accomplish. But what is the mission? How must one prepare himself? What does he consider necessary to give of himself in order to attain this objective?

At the beginning each individual chooses an objective—certain or uncertain - whose significance is closely related to his knowledge and potential and to the environment in which he has lived and acted. This objective is to live with satisfaction and with dignity. But how does one live with satisfaction and with dignity? Once again we have the fact that what the person considers to be a *life satisfying and dignified* depends on his potential and knowledge and on his environment. But what is important is that he wants a satisfying and dignified life.

And what does one do to obtain this desired objective? prepare oneself and how? by different means, according to him and to his environment: obtaining overprotection; securing privileges; developing activities depending on his capacity for a partial or complete participation in the life of the community; developing to the maximum his potential to participate with all his vigour and efficiency in the development of his community.

And what does he expect from himself? To be a passive subject to his environment, to make some effort to acquire privileges, to fight a little to obtain a better future within his environment, to give himself completely to his formation in order to obtain the desired - a satisfying life economically, socially and culturally.

But what does he expect for himself? He expects overprotection, privileges, understanding or opportunities to fulfil his potential.

The discrepancy between the expected and the received, or obtained, is one of the most serious causes of maladjustment. If the individual desires overprotection, because he is sure that with it he can live with dignity and satisfaction and he does not obtain it in the proportion and degree expected, he will feel maladjusted and those who offer or deny him these things will see it, although in many of them lies the responsibility of having taught him to demand it. The same will happen with the blind adult who believes, because he is convinced of it, that the enjoyment of special privileges is what is required in order to reach his objective. He who looks for understanding to develop his abilities—those abilities which he decides are necessary through their utilization to reach the desired well-being-and not obtaining them, this individual feels maladjusted and he is, and the community sees him in this way, although it never convinces itself the reason. He who has made up his mind to search for the total development of his potential; to participate actively in the community life, to compete with its members for a promising future, and to accomplish thereby the satisfaction of his desire with the permanent enjoyment of progress within the framework of his own dignity, and does not obtain the opportunities that permit him this position, will become maladjusted. Occasionally, the community gives him the opportunities because, precisely, they consider him maladjusted, *i.e.* with un-realistic objectives in view of his capacities.

He who expects from himself something which he does not obtain and from his environment something which he never reaches, will be maladjusted. But also he who expects something from himself which does not correspond because it cannot be or something from the environment which does not fit in with his personal character, is maladjusted.

On the other hand, he is adjusted who lives normally, with satisfaction and dignity, as if he were not blind and in spite of blindness.

The Opportunity for Self-Realization as the most Efficient Method for the Adjustment of the Blind Adult

The greater the distance which separates the reality of the blind adult from the objective which he has chosen, the greater will be his maladjustment. The greater the distance which separates his self-realization from that of those whom he considers to have equal rights and equal opportunities, the greater will be his maladjustment.

Therefore, what is one of the greatest causes of the maladjustment of the blind person? The insufficient number or lack of opportunities for the self-realization of the person, as an individual with equal rights and equal opportunities to share equally the responsibilities. And what, then, is the form to combat maladjustment of the blind person? That of helping them to help themselves to adapt to themselves and to the community. To place within reach the adequate, convenient facilities in order that they realize themselves in what they would have been able to be if they had not been blind and in spite of their limitation. And in order that they participate in accordance with their interests, potential and individual abilities in an economic, social and cultural interchange.

And how does one make the blind adult accept the opportunities for self-realization, conquering that which in himself or in his environment is against him, in light of the science which deals with this aspect. Through the work dedicated to the education of his environment, to convert it into something favourable for the work to which he dedicates himself; through the direct work with the individual to see that he accepts his limitation, develops the necessary abilities to adjust to it, and utilizes the help which he in reality requires. And what are those required opportunities so that the blind adult reaches self-realization? They are: Competent professional services of ophthalmology, Social work, Pre-rehabilitation, Integral rehabilitation, follow up, materials and equipment, Libraries, Welfare.

Conclusions

Never before has it been so difficult to respond to the requirements of civilization as it is today. Never before has the blind person had better opportunities for the development of his potential and his total integration in the productivity and normality of the society. But, in spite of this, the great majority of blind adults in the world form a marginal group of the society.

The blind person desires integral participation in the construction of his future and in the future of his community; but every individual aspires to that which he recognizes as possible, aspires to give of himself and to receive or obtain that which he considers necessary for his well being. If he has deceived himself in what is required to enjoy this well-being, or if he does not succeed in attaining it, he is maladjusted or will become maladjusted.

The insufficient number or lack of opportunities for self-realization is one of the most important determinants in maladjustment; and because of this, the best form to combat maladjustment is to offer facilities which the blind person may use for his incorporation or reincorporation into a full life. These facilities, some of which I have mentioned, which all of us know or have the obligation to know and investigate, will give the blind person the possibility to prepare himself better every day to respond with certainty and efficiency to the challenge of a changing and complex civilization.

Recommendation

Based on the preceding text, and on other facts and considerations which in view of the required brevity I have not mentioned, allow me to recommend to this honourable Assembly in the name of the Colombian Delegation:

That the World Council for the Welfare of the Blind solicit from the United Nations that its specialized organizations, in co-operation, and with the technical assistance of the World Council, the American Foundation for Overseas Blind, The Royal Commonwealth Society for the blind and other specialized international entities and those of each member or non-member country, study, programme, finance and execute a worldwide campaign with emphasis on the total integration of the Blind person into the activity and productivity of his own national community, using as the base his potential and interests and leaving to one side other considerations.

That this petition is justifiable by the incontestable reality that the blind person has, being human, the right and the responsibility to contribute integrally to the harmonious progress of his country, to enjoy a full life, and that for all of this he deserves the indispensable opportunity. That this programme be directed principally to the blind adult.

THE IMPACT OF TECHNOLOGY ON THE EDUCATION OF BLIND CHILDREN AND COLLEGE STUDENTS

By **Dr E. J. Waterhouse,** *Director, Perkins School for the Blind, U.S.A.*

My topic is the impact of technology on the education of school and college students who are blind. For the purposes of this paper, I want to deal with technology in rather wide terms, and while I will have a little to say about some of the advances in technological devices for the blind, the impact of this is small compared with that of science upon world society in which all of us, blind and seeing, are living.

Our very presence here in New Delhi was made possible by innumerable advances in electronics, computer technology and aviation science which in turn were made possible by advances in chemistry, metallurgy, engineering and a host of other subjects. Some of the advances which made it possible for us to come together were nonexistent when most of us were in school. So it is fair to say that whatever effects the discussions these two weeks will have on school and college students, result in part from recent technology.

Our blind school children and college students, even those who receive their education in residential schools, live in a world of the seeing. What their brothers and sisters who have sight do and what they learn, blind pupils must also seek to do and learn. So it is necessary that we consider the impact of technology on education as a whole.

Education has been affected by technology for centuries. We can look back at least to the time when the printing press was invented and perhaps should go further back to the emergence of the first alphabet. Certain commonly used inventions have proved of particular value to blind students such as the type-writer, record player, tape recorders and radios. Thanks largely to our Japanese friends, tape recorders and transistor radios are now available at low cost in almost all parts of the world.

Then, of course, there have been special devices designed for the blind such as braille writers and braille printing presses. The effect of these things and of some common objects adapted for the blind (such as the long cane) are well known.

While time forbids me from going into details about the effects of particular devices, the electronic computer of our generation has had an impact on education which can only be described as revolutionary. It demands our special attention.

The importance of computers as a means of employment for blind men and women is becoming well known. So, too, is the fact that several American Universities offer courses for blind students in computer programming. I am told that similar courses are offered in England and Western Europe. The great and rapidly increasing shortage of programmers, rather than any concern for the welfare of the handicapped, is compelling the computer industry to open its doors to the blind.

But this paper is concerned with education where computers are also playing a revolutionary role. They are already in widespread use in American schools on a "shared-time" basis. Those of you who came to Watertown for the ICEBY in 1967 heard a paper on this subject. I gathered from comments made at the time that few of the delegates believed that such a programme would be introduced into schools for the blind for a long time. However, Perkins installed two teletype keyboards in 1968 and is considering adding a third in 1969 which are tied by direct line to a computer.

As I prepare this paper in May 1969, the output of these keyboards is still in ordinary print, not braille. Our pupils ask the computer a question by typing in the usual manner, but using whatever language or code the computer is programmed to understand. In reply, the unseen fingers of the computer, located miles away, operate the keyboard with speed and unerring accuracy. A seeing person is needed to read the words to the blind student.

However, we expect that by October 1969 when this paper is given, we will have already installed two entirely different experimental devices which will give the answers in braille. One of these is the high speed braille embosser under construction at the Massachusetts Institute of Technology in Cambridge, Massachusetts. This was demonstrated to the ICEBY delegates. It produces braille on a continuous roll of paper. The second device is under development by a retired telephone company engineer in Arizona. In its current stage, it embosses braille on paper tape, but thought is being given to having the device operate an IBM electric braille typewriter which also embosses on a continuous paper roll.

I do not wish to dwell too long on the subject of computers, although their effect on education is profound. To the head of a school where there are presently insufficient funds to purchase typewriters or simple braille equipment, computers may still seem a topic for the 21st century. No one can predict when blind pupils in this beautiful city of New Delhi, for example, will type out their first instructions to a computer. Few, if any of us, at the ICEBY in 1967 (and this certainly included myself) imagined that any blind pupils anywhere would be doing so before 1972 at the earliest. Yet it happened at Perkins in one year and braille output has become available in two. It is possible that only a few schools in America or elsewhere can presently afford what our pioneering programme is costing us, but it is not an impossible sum and we expect the cost per pupil will drop sharply in years to come. Only a few years ago, the expense involved for a programme of this kind would have been entirely prohibitive. It is so no longer.

So far I have dealt only with recent advances which have produced devices usable by the blind. Unfortunately, some of the most effective techniques developed for teaching in recent years depend upon sight. The use of so-called audio-visual equipment depends at least as much on vision as it does on hearing. The use of photographic slides, overhead projectors which can make print material available to large groups simultaneously and, of course, motion pictures and television, all leave our pupils at a disadvantage. Compared with these, the use of tapes is relatively small. Yet our blind pupils are becoming more and more forced into competition with the seeing world and to this extent, technology is widening the gap between blind students and their seeing brothers and sisters.

But I would like to turn to a different aspect of the subject and deal with the indirect effects of technology and recent scientific advances on education as a whole. In the last few years, schools in America (and I believe in Europe also) have been revising their curricula at unprecedented speed. While this may not be clearly the result of technological developments, science has been a causative factor and, indeed, has made many of the changes inevitable.

We are faced with an overwhelmingly large increase of knowledge in every conceivable subject. We cannot give the attention we once did to details because there are so many more of them. For example, in biology, botany and zoology, new worlds have opened up. In philosophy, psychology and the social sciences, not only new knowledge, but new theories exist and need to be studied. Medicine moves so fast that the practicing specialists have to struggle against becoming obsolete overnight.

Science and technology are responsible for this in many ways. Not only have new tools been developed to further research, but new means of conveying information exist. The telegraph, teletype and telephone make instantaneous communication possible. Newspapers and magazines are up-to-date. Books are inexpensive and their numbers increase at a terrifying rate. Scientists working in one part of the world are kept in touch with their fellows elsewhere so that they can become co-operating teams and not single isolated workers; and once their work is completed, the knowledge acquired can be distributed to students at the appropriate level in rapid time. Here it might be mentioned too that the blind suffer a serious disadvantage for print textbooks become obsolete more and more rapidly. The problem of providing the latest books in braille gets more difficult each year.

This impact of the information explosion on blind students is particularly serious. Visually handicapped students have always had to contend with the fact that blindness causes delays in learning as in many other things.

Reading and writing braille are slow. Looking up subjects in braille books is far slower than scanning print with the eye. This slowness is compounded by the need for learning some things that seeing children do not need. Independent travel which is proving its value in one country after another over the world cannot be taught in a short time. Learning to read and write braille and to use a typewriter, all of them make their special demands on blind students' time. Until computers make it possible for blind people to obtain information rapidly in print or in sound, this time lag between the seeing and the blind will become increasingly serious.

I think we are facing a crisis in curriculum development. In science and mathematics educators have kept reasonably up-to-date. In some other subjects this has not happened. The social sciences are an obvious example. In a world where almost every kind of event which has happened in the past is happening daily at some part of the world and knowledge of it is being produced on the radio hourly, the subjects which most of our children have to study to pass their examinations is dangerously irrelevant. As we struggle to take maximum advantage of the latest in science, we must recognize the responsibility for training young men and women to view their world in perspective.

Many of today's students have learned the arts of protest. In practicing them, they can do serious harm to themselves as well as others. The curricula we plan as educators should bear in mind that good judgment is something youth must acquire if society is to survive. Good judgment depends on accurate knowledge—not of dead kings and presidents and far-off wars, but of the events of history, past and recent, which have particular significance for today and tomorrow.

The task of revising curricula makes heavy demands on our time—too heavy for most of us as individuals to bear. Experts in curriculum planning do exist, but they are in short supply. Time is short if we are to guarantee to the young men in our schools and colleges an education fit to meet their needs. The newest techniques in research and in the dissemination of information should be put to maximum use in modernizing our courses. Projects on a national, and perhaps international, level may be called for. This seems to me to be one of the foremost challenges we face.

The most notable factor in modern technology is that of change. Change which is changing faster all the time. We have a responsibility to make sure that the young men and women of today are prepared for change. Most of us here today have not more than two or three decades of professional life ahead of us, but there are children in our schools who will be active for a far longer time. We cannot predict what the world will be like for them and we should help them to understand that we cannot. A readiness to accept change may be necessary for their economic survival.

And with change comes an increase in options and unquestionably technology is opening up many new fields to the blind. A capacity to choose a vocation wisely is becoming increasingly important, not only for pupils but for educators as well. An open mind as well as a flexible one is needed to cope with the problems of today and this is going to be increasingly so as the years go by.

Technology has not only brought to education innumerable advantages, but it has opened up a whole Pandora Box of problems. Our task is to take advantage of the scientific knowledge of today to see that the new tools we possess are used to solve the new problems they have helped to create.

REPORTS OF STANDING COMMITTEES

Friday afternoon, October 10, 1969.

COMMITTEE ON PROFESSIONAL AND URBAN EMPLOYMENT

By **Mr Charles Hedkvist,** *Chairman*

Since the General Assembly of W.C.W.B. in New York in 1964 the Committee on Professional and Urban Employment has had the following composition:

Mr D. C. MacFarland, Chairman	(USA)
Mrs A. I. Bakare	(Africa)
Mr H. Iwahashi	(Japan)
Mr John C. Colligan	(Great Britain)
Mr A. Magill	(Canada)
Lt. G. L. Nardekar	(India)
Mr Hans Seierup	(Denmark)
Monsieur André Nicolle	(France)
Dr Nina Serpokril	(Russia)
Mrs Dorina de Gouvea Nowill	(Brazil)
General L. Sotillos	(Spain)
Prof. Dr Carl Strehl	(Germany)

In the end of 1968 Mr MacFarland announced that owing to the great amount of work he has to do he could not remain as Chairman of the Committee. After application from the President of the W.C.W.B. I undertook the task to act as Chairman towards the General Assembly in New Delhi in 1969 on the assumption that Mr MacFarland could give me the necessary support in his capacity of Vice Chairman. I want to take the opportunity to express my best thanks to Mr MacFarland for his loyal and qualified assistance connected with making this report as well as in other respects.

General background

The modern commercial and industrial life is for the moment sustaining a process of rationalization which with its consequences can only be compared with the breaking through of the industrialism during the nineteenth century. The rationalization does not affect only the industrial activity of the big concerns but also small business enterprises, farms, offices and different intellectual branch professions. One fact of importance in the process of rationalization is that this is based on scientific investigations to a great extent, the results of which have got an international distribution. The rationalization within the modern economic life has got a clear international feature thereby. Certain labour domains are moreover of global interest, such as the teaching and legal professions. Furthermore the administrative organization all over the world is as a principle working under the same technical conditions. These circumstances have increased the importance of international co-operation, among other things when it is a question of finding tasks for the blind within the economic life.

You can also notice an increased international activity in this domain. Here only a few examples:

During the time 21st - 26th May, 1967 Allgemeiner Deutscher Blindenverband in Berlin arranged a symposium where specialists from a large number of European countries tried to analyse different facts of importance in connection with the employment of the blind. The proceedings of this seminar have been edited by the Allgemeiner Deutscher Blindenverband.

At the meeting of the European Regional Committee in London on the 19th - 20th July, 1968 there was rendered an account of a very ambitious investigation as to "the work conditions of the blind in Europe" compiled by the secretary of the European Committee, Doctor Alfons Gottwald.

The global importance of these questions is proved among other things also by the resolution approved at the 3rd Asian conference in Manila on the 26th - 31st August, 1968, regarding work for the blind.

The problem with regard to the employment of the blind within the modern economic life has also been dealt with directly or indirectly in other relations. Here only ILO's resolution at the 52nd session regarding handicapped workers in June, 1968 is indicated.

Also on the national level the activity has been intense during the last years. Further the American Foundation for Overseas Blind, The Royal Commonwealth Society for the Blind and other agencies with international activities have started a number of interesting projects. In many countries investigations and studies of these questions have consequently been made with results of importance not only for the country itself. *e. g.* we know that in India projects now are under way studying the use of low vision aids, the incidence, prevalence and causes of blindness, the rehabilitation of blind persons in the metal trades, and many other important aspects of rehabilitation of the blind.

The purpose of the Committee

Since its origin in 1954 the Committee on Professional and Urban Employment has regarded as its main purpose to collect material as to the employment of the blind within the modern economic life and to make this material available for organizations and institutions in other countries.

However, the rapid changes within the economic life and the increased activity on the national as well as the international level have made it more and more difficult for the Committee to fulfil its task with the existing organization and its limited resources. A reorganization of the activity should, therefore, be taken into consideration. Then it is a question of 3 points above everything that ought to be answered:

1. The material in this range is enormous in itself and a substantial task will, therefore, be to make it surveyable. The collection of facts must, therefore, be limited at first hand to the factors of international interest which have importance for the employment of the blind. An analysis of these factors should, therefore, be made. Thus it is true that the information of the number of blind people employed in a branch has a certain propaganda value, but from an objective point of view it is of limited international interest. On the contrary it is of great importance to find ways for rendering of a statement of different working branches. A difficulty is thereby the fact that the definition of a working branch has often a varying meaning in various countries. It is, therefore, necessary to be precise what you mean for instance by indicating general education demands for a special job, and by indicating what tasks within the branch that are considered suitable for the blind. Other factors of international interest are the contents and the extent of the education, the need of special technical means of assistance and devices at the places of work, the question of how the need of special service is solved, say a secretary in order to make it possible for the blind to execute a qualified job, etc.

2. In order to place the material at the disposal of interesting people in all countries as completely and quickly as possible, the Committee must get into contact with the institutions of every country which have the purpose to collect such material. The organizations and institutions represented in W.C.W.B. have generally not the purpose to collect material of this kind systematically in their home countries. The Committee must, therefore, try to establish a continuous co-operation with other institutions in several countries.

3. The Committee must have at its disposal a documentation centre and a secretariat which can systematize, sort and supply the material to all interested.

However, with regard to W.C.W.B.'s budget it will probably be impossible to give the Committee sufficient resources for the collection, the working up and the distribution of the material. The Committee should, therefore, explore the possibilities of co-operation with some international organization dealing with such tasks which has resources to undertake these tasks.

ILO might be a suitable organization for such a co-operation This organization has continued contacts with Governments, Employers' Confederations and Trade Unions in many countries and is consequently able to collect necessary documents from the institutions dealing with problems on the labour market in different countries.

ILO also has a relatively large administration for collecting, dealing with and distributing the documents. Furthermore ILO's interest in handicapped people—as it has been reflected among other things in the resolution of June, 1968—indicates a positive willingness, and W.C.W.B.'s purpose in this connection should, therefore, be to assist ILO when shaping the practical activity for the blind.

Proposal

Thus I propose that the Executive Committee of W.C.W.B. nominates a new committee "The Committee on Professional and Urban Employment" with a view to assisting the co-ordination of the endeavours in this respect. In order to become capable of work the Committee should consist of 5 members at most, with special experiences regarding blind people's problem of employment.

The purpose of the Committee should be to try to establish an organized co-operation with ILO according to principles indicated in the foregoing, and to follow the development continuously in order to see to it that the activity gets the formation and the contents at which W.C.W.B. aims.

COMMITTEE ON RURAL ACTIVITIES

By **Capt H. J. M. Desai,** *Chairman*

MEMBERS

Capt. H. J. M. Desai, Chairman,	(India)
Mrs Elisa M. de Stahl	(Guatemala)
Mr John F. Wilson	(United Kingdom)
Monsieur l'Abbe Richard	(France)
Mr Mallam Kurama	(Nigeria)
Major D. R. Bridges	(Malaysia)

Publications

In pursuance of an earlier circular issued by the Rural Activities Committee, it was agreed to undertake some studies pertaining, *inter alia,* to regional problems to facilitate and guide the development of new Rural Projects in broad geographical regions.

It was also agreed to print a Directory of all Rural Institutions working exclusively for promoting the training and resettlement of the rural blind.

The Committee is happy to report that the following three publications have been printed and will be made available to the Delegates attending the Fourth General Assembly:

(*a*) Planning Agricultural and Rural Centres for the Blind
by
Major D. R. Bridges
and
Capt. H.J.M. Desai

(*b*) Resolutions on Training Resettlement and Welfare of the Rural Blind passed at International, Regional and other Important Conferences since 1954.

(*c*) Directory of Institutions Training the Rural Blind in Agriculture, Allied Pursuits and in Rural crafts.

Publication No. I brings out the salient principles in planning Rural Training Centres and Resettlement Programmes. The Handbook is intended to facilitate the task of Government Departments and Voluntary Agencies planning to start new Agricultural and Rural Training Centres as also Rural Resettlement Programmes.

It was also felt that Resolutions passed at International, Regional and other important Conferences on topics pertaining to rural activities would greatly strengthen the hands of Government Officials taking decisions sanctioning new Projects.

It is hoped that the two publications would go a long way in removing the diffidence of Government Departments and Voluntary Agencies planning to launch schemes for the rural blind. When officers planning rural projects know that in several other countries, such projects have been successful, and several trained blind are happily resettled in their villages on their own or family farms, they get added confidence to press their claims for financial allocations for such Projects.

It is hoped that the Directory of Institutions training the rural blind would facilitate the exchange of experiences in the field. Blank pages have been added to facilitate recording of names and addresses of projects which may be developed hereafter.

Dedication

Publication No. I on "Planning Agricultural and Rural Centres for the Blind" has been dedicated to our late revered colleague Sir Clutha MacKenzie in appreciation of his magnificient contribution to blind welfare and particularly to the training and resettlement of rural blind.

Acknowledgement

The printing of these three publications was made possible because of generous grants from the Government of Maharashtra and the International Council on Social Welfare, Regional Office for Asia and Western Pacific. The Committee is grateful to them. All the three publications have been printed at no cost to the W.C.W.B.

Pictorial Folders

The Committee had also decided to print Pictorial Folders depicting rural blind the world over at work in agriculture and in farm pursuits. It is regretted that this could not be done. However, some photographs have been included in Publication No. I.

Hope for the future

It was at the General Assembly of the W.C.W.B. at Paris in 1954 that a pioneering lead was given by recognising, at the international level, the need for establishing Agricultural and Rural Training Centres for the Blind and for planning rural resettlement programmes. In some 15 years, a global movement has developed and the concept of training and resettlement of rural blind in their familiar rural surroundings has now been well accepted.

Though a good deal of pioneering work has been done, looking to the large numbers of rural blind involved—exceeding some 10 million the world over—it is obvious that a tremendous lot yet remains to be done.

It is hoped that the three publications brought out by the Rural Activities Committee of the W.C.W.B. would be of some help in accelerating the pace of progress.

The Committee is grateful to the President Mr Eric T. Boulter, to Mr John Wilson and to all other friends who have assisted in the printing of these publications.

COMMITTEE ON SERVICES TO THE DEAF-BLIND

Presented by **Dr Richard Kinney** *on behalf of* **Dr Peter J. Salmon,** *Chairman*

Introduction

As is the case with all of the Committees of the World Council, our Committee has, of necessity, done a good deal of its work through correspondence. However, in the pentad this report covers there have been two formal meetings of the Committee. The first was held at Rome, Italy, on April 14, 1967, and the second was held in Brooklyn, New York, on November 6 and 7, 1968. The full minutes of these meetings will be forwarded on request to any interested member of the World Council.

Our purpose in this report is to give as much substance as possible, with an endeavour to keep it also as brief as what we have to report will permit. The period under review has been marked by a movement for the better on behalf of deaf-blind persons in many areas of the world; however, the situation with respect to these persons still remains tragic in all countries.

Survey of services to the deaf-blind throughout the world

One of the most important endeavours of our Committee was a first survey of what is happening throughout the world in terms of services for deaf-blind individuals, both children and adults. This is not a survey in depth, but a first attempt to get some limited information as to what is happening in various areas of the world. Copies of this preliminary report were made available to the members of the World Council at the World Assembly held in New Delhi in October, 1969. Several countries did not respond to the questionnaire, and the Chairman of the Committee was publicly criticized for this, but could take no responsibility because all questionnaires received were tabulated and results included in this preliminary report. However, in order to take care of this situation, Perkins School for the Blind and The Industrial Home for the Blind published a revision of this preliminary report, including the additional information received, and this Supplementary Report has been distributed to each member of the World Council. Additional copies are available for those interested. The Committee on Services to the Deaf-Blind is grateful to all those who co-operated in this attempt to get some basic information relative to services for deaf-blind persons throughout the world.

Audience with His Holiness, Pope Paul VI

By resolution of the General Assembly of the World Council held in New York in 1964, the Chairman of the Committee on Services to the Deaf-Blind was authorized to seek an audience with His Holiness, Pope Paul VI, for the purpose of enlisting his good offices on behalf of deaf-blind persons throughout the world. This audience was accomplished, after very considerable negotiations and with help from a number of interested persons, on April 15, 1967. Some 80 persons, representing 18 nations, were present, a rather remarkable fact because the final word that the audience would be held was not received by the Chairman until five weeks prior to the date of the audience. What we were informed would be a very formal meeting with Pope Paul VI turned out to be quite informal instead, and this caused some confusion in getting the photographs set up as we would have liked. Also, some members of the Committee felt that the Pope had not been sufficiently briefed, because in the statement which he read he referred to the blind and the deaf and did not seem to have the deaf-blind in mind, even though this had been presented over and over again in the correspondence. However, the objective of the audience with His Holiness was attained because the official printing of his statement in the Vatican paper, L'OSSERVATORE ROMANO, contained the correct Latin reference to the deaf-blind and the English translation did so as well. The information in this newspaper is picked up in various areas of the world. We do not have any accurate report of to what extent the reference to the audience was disseminated. In the end, we felt our mission was accomplished.

Meetings with Heads of State

In reviewing this matter, the Committee desires to urge the delegates of the World Council for the Welfare of the Blind to seek wherever possible a positive expression of the plight of deaf-blind persons from heads of State in the various countries. Only in this way, it is felt, can the desperate situation of deaf-blind persons throughout the world be given the emphasis that is necessary in order to stimulate existing movements or to create new approaches to the problem where none already exist.

Anne Sullivan Centennial Commemoration

One of the most significant events of the five-year period was the celebration of the centennial of the birth of Anne Sullivan Macy, the world-famous teacher of Helen Keller. This effort was sponsored jointly by Perkins School for the Blind, Watertown, Massachusetts, and The Industrial Home for the Blind, Brooklyn, New York. This was an educational project, and it created interest and some positive action not only in the United States, but in other countries of the world.

A highlight of the celebration was a never-to-be forgotten Memorial Service at the Washington Cathedral, Washington, D. C., on Sunday, April 17, 1966, attended by hundreds of blind, deaf-blind, and deaf people. A beautiful and touching ceremony was held, during which eight deaf-blind individuals were presented the newly established Anne Sullivan Centennial Award, a presentation by Perkins and IHB. Additional recognition was given to a number of blind, deaf-blind, and sighted individuals who had made significant contributions to the education and rehabilitation of deaf-blind persons over the years.

One of the outstanding occasions of the Anne Sullivan Centennial Commemoration was the presentation of a special Centennial Award, the Anne Sullivan Macy Citation, to Louis J. Bettica, Co-ordinator of the Anne Sullivan Macy Service of The Industrial Home for the Blind. This award was presented on a one-time basis by the American Association of Workers for the Blind.

Membership of Committee

At this point we would like to mention the members of the Committee on Services to the Deaf-Blind, a list of which appears at the conclusion of this report. It is a small Committee with a number of very important consultants and resource persons. We feel it will be of interest to the Council delegates for us to mention the following persons specifically:

Mr Arthur R. Sculthorpe, who has been a very faithful and active member of the Committee, has just celebrated his 65th birthday and has decided to continue his work for the Deaf-Blind Helpers' League, of Peterborough, England. In making the announcement, Mr Sculthorpe has written a very interesting and significant paper which is worthy of perusal by anyone interested in deaf-blind persons. Mr Sculthorpe made a trip to Russia, by invitation, to attend the 18th Annual International Psychological Congress in Moscow on August 1-7, 1965, the proceedings of which have been printed in brochure form. In 1967, Madame Olga Skorokhodova and Prof. A. I. Mescheryakov, of the Institute of Defectology in Moscow, visited Mr Sculthorpe in Peterborough. Mr Sculthorpe was one of those who received the Anne Sullivan Centennial Award.

Dr. Richard Kinney travelled to a number of countries in Europe, Asia, and South America. He saw the heads of states in a number of countries and visited with high officials in all. He has reported on these visits in considerable detail, and we are sure that for those who may be interested Dr Kinney would be pleased to furnish a report. Also, we are happy to report that Dr Kinney received an honorary doctorate degree from his Alma Mater, Mount Union College, Alliance, Ohio. He continues as a most active and valuable executive as the Executive

Vice President of Hadley School for the Blind, a world-famous correspondence school which provides service to blind and deaf-blind persons in many countries of the world. The Hadley School has recently developed a correspondence course for deaf-blind people, INDEPENDENT LIVING WITHOUT SIGHT AND HEARING, which is proving successful. This is being taught by a deaf-blind woman, and 29 students throughout the country are taking the course. Dr Kinney was also one of the recipients of the Anne Sullivan Centennial Award.

Dr Edward J. Waterhouse, who chairs the International Committee on Education of Blind Youth, and is also a member of the Committee on Services to the Deaf-Blind, has continued to travel effectively to various European and Asian countries. His influence, especially in the area of training and education of deaf-blind children, is of inestimable value. In the United States, Perkins School for the Blind, through the work of Dr Waterhouse, continues to lead the work for deaf-blind children. He has spearheaded a new approach to this work in the United States under special legislation which provides support, through the U.S. Office of Education, for the development of Centres for the Training and Education of Deaf-Blind Children, and to this end Perkins School for the Blind has begun the construction of two new buildings to house the first of these centres at Perkins.

Dr Gerrit van der Mey, of Netherlands, who is an eminent mathematician engaged in sophisticated computing, is a unique member of the Committee on Services to the Deaf-Blind in that his whole approach to his life and his chosen field of endeavour is one which he considers a "lay" approach. In other words, Dr van der Mey does not feel that he has an expertise in services for the deaf-blind because of his personal philosophy that he is simply an individual who is devoted to his work and to his family and that he is not, nor has he sought to become a professional in the field of deaf-blindness. This very concept, as well as his social philosophy, however, has made Dr van der Mey an interesting and valuable member of the Committee on Services to the Deaf-Blind, as he brings an entirely different approach to the development of a career by a deaf-blind person. Dr van der Mey was presented the Anne Sullivan Award at his home in Dieren, Netherlands, when Dr Waterhouse was in Holland in August, 1968, in connection with the meeting of the International Conference on the Education of Deaf-Blind Children. Dr van der Mey is the author of a valuable 4-volume treatise on data processing and its engineering.

Mr Robert J. Smithdas, who is a long-time consultant to our Committee, is the Associate Director of Services for the Deaf-Blind at The Industrial Home for the Blind. Mr Smithdas is himself a deaf-blind person who received his Masters degree from New York University in 1954. He was named Handicapped American of the Year in 1966, by the President's Committee on Employment of the Handicapped of the United States. Mr Smithdas joined Dr Waterhouse in a visit to Japan, where he and Dr Waterhouse conferred with high officials in the government, as well as those interested in the education and rehabilitation of deaf-blind persons. It was a most valuable trip, which has engendered additional interest and action on behalf of deaf-blind persons in Japan. Mr Smithdas is an author and a poet. His autobiography, "LIFE AT MY FINGERTIPS," is now out of print, but his volume of poems, "CITY OF THE HEART," by his permission, will be made available to any delegate of the World Council requesting it. Requests should be addressed to:

Mr Robert J. Smithdas, Associate Director
Services for the Deaf-Blind
The Industrial Home for the Blind
57 Willoughby Street, Brooklyn, N. Y. 11201, U.S.A.

Dr HELEN KELLER

On June 1, 1968, the world mourned the death of our beloved Helen Keller. Dr Richard Kinney represented the Committee on Services to the Deaf-Blind in the memorial programme to Helen Keller at the meeting in New Delhi, and recommended, in accordance with the resolution adopted by the Committee on Services to the Deaf-Blind, that work for the blind in the world, or in each country, as the case may be, set aside a memorial year in honour of Dr Helen Keller. The year 1970 might be a very fitting time, since on June 27 of that year, had she lived, Dr Keller would have been 90 years old.

Though Helen Keller was not a wealthy person, we think it is significant and deeply touching that she remembered the World Council for the Welfare of the Blind in her will, especially in relation to deaf-blind persons. The Chairman has worked very closely over a long period of years with Helen Keller on matters relating to the deaf-blind and is very happy that she realized one of her greatest dreams with respect to services for the deaf-blind, a matter which we shall presently discuss.

National centre for deaf-blind youths and adults

As far back as 1945, Helen Keller inaugurated the Department for the Deaf-Blind at The Industrial Home for the Blind, at which time only eleven deaf-blind persons were being served. Today, IHB has a register of 225 deaf-blind persons, 127 men and 98 women. This development has been accelerated since 1956, when the first study of IHB services for the deaf-blind was made possible by a grant from the Office of Vocational Rehabilitation of the U.S. Government. In 1962, an expanded service was made possible through another grant for providing services to the deaf-blind in some 15 states of the United States along the

Eastern seaboard. This project will have been completed by the time this report is received.

The reason for giving this background is to announce that by the time this report is read by the delegates, a National Centre for Deaf-Blind Youths and Adults, with Federal support, will be in the process of establishment. This will mean that over the years ahead a complete service for deaf-blind youths and adults will be developed throughout the United States. This is the dream of Helen Keller to which we referred. It is the hope of our Committee that this National Centre and the Centres for the Training and Education of Deaf-Blind Children will be the forerunners of similar services throughout many countries of the world. Helen Keller would have asked for no less.

Communication and loneliness

In the past the Committee has emphasized communication as the key to the training, education, and rehabilitation of deaf-blind persons. We now add a further dimension, which is what we might term "profound loneliness." All too little attention has been given to the depth of unhappiness that can confront a deaf-blind person, particularly when he has little or no meaningful purpose in his life, and even with opportunity for some socialization and employment, there is still this great gap or void which besets the deaf-blind person. What is needed is communication and *concern,* as well as respect for another human being by individual persons who will take time to fill in this gap of loneliness. Great emphasis needs to be placed on sufficient communication to diminish the periods of profound loneliness which each deaf-blind person experiences. Although the Committee worked out a simple means of international communication using the printing of block letters in the hand of the deaf-blind person, this still needs revision and refinement. Other means of communication, such as the one-hand American manual alphabet, the two-hand British and Canadian manual alphabet, the Lorm alphabet used in Western Europe, and the tactual reading of lips (Tadoma method) are helpful means of communication.

Devices

A limited variety of mechanical or electronic devices is available, such as the Tellatouch developed by the American Foundation for the Blind, and its counterpart, the "Conversation Machine," used in other parts of the world, particularly in Norway (a machine with a standard typewriter keyboard which converts the pressed letter into a Braille cell at the rear of the machine, which can be read by the deaf-blind person one letter at a time). The limited use of the telephone using the vibration method with the Morse Code, which was developed by several telephone systems, serves a useful purpose. The development of the doorbell for use by deaf-blind persons is still to be perfected. Progress has been made in England and the United States and in Sweden, with an electronic device to alert a deaf-blind person when his doorbell is ringing. The Royal National Institute for the Blind in England has done the most important research and development of this device.

Dr. Gerrit van der Mey, in Netherlands, uses an ingenious device, which he calls a "Teletouch." He describes it as a normal teletypewriter with a sort of Teletouch attached to it, which functions simultaneously with the teletypewriter. When a message is received, each letter which appears in black-print on the paper is also produced in Braille on the Teletouch. In addition, a tape is punched, which can be read over and over on the Teletouch. Dr. van der Mey may also type his reply on the teletypewriter, which is then also recorded on the punch tape and may be re-read on the Teletouch tape reader. One of the great advantages of this apparatus is that it can be used at great distances over telephone wires. A unique advantage of this equipment is that it makes a permanent record on punched tape. We have extracted and briefed this description from a report presented by Dr. van der Mey at the Rome meeting of our Committee and contained in the minutes of that meeting.

With these and some other devices as a basis, additional means of making life easier and more practical for deaf-blind persons is a major consideration for the immediate future.

Literature and Films

There is a very meagre amount of written material available with respect to services to deaf-blind people. The American Foundation for the Blind and the American Association of Workers for the Blind in the United States have developed a bibliography of literature on blindness and deaf-blindness. A separate bibliography appears in a publication of the American Association of Workers for the Blind, "BLINDNESS 1966," and is entitled "THE DEAF-BLIND PERSON: A REVIEW OF THE LITERATURE," by Dr. Herbert Rusalem and your Chairman. The Chairman has a limited number of copies available and will forward one on request. Perkins School for the Blind has one of the most substantial libraries in the world on the subject of blindness. However, it is not a lending library. Perkins does have some literature which would be made available on request. Other agencies have literature on the deaf-blind, but the Committee is not aware of how available this may be for distribution. It is the hope of the Committee to develop as much information on the subject as possible, and toward this end the Committee would welcome knowing of any agency which has literature available for distribution on the deaf-blind.

The American Foundation for the Blind has several films on deaf-blindness. Perkins School for the Blind and The Industrial Home for the Blind have jointly developed the most recent film concerning deaf-blindness, which is entitled, "THE LEGACY OF ANNE SULLIVAN." It is a 16mm., 29-minute film in colour and is narrated. It is available free of charge, except for return postage, from:

Film Library, Campbell Films
Academy Avenue, Saxtons River, Vermont 05154, U.S.A.

Conclusion

While the Chairman has cleared this report with the members of the Committee, he reserves this paragraph to himself. This is because he wishes to express in the most forceful terms possible the extraordinary commitment and help he has received from the members of the Committee, the Consultants, and the Resource Committee. Through the development of this large group of persons the impact of the problems and the development of services for deaf-blind persons has been greatly broadened, and the Chairman is greatly encouraged that, for perhaps the first time in history, we have today the beginnings of a world-wide movement on behalf of deaf-blind individuals who have been neglected for centuries. While there is much to be accomplished, we have the firm belief that the seeds that were planted so many years ago by Helen Keller, and which she nurtured all during her lifetime, will now bring fruit, and that the harvest will grow in usefulness and benefit to deaf-blind persons increasingly in the years ahead.

Speaking for the Committee, the Chairman expresses thanks to the World Council for the Welfare of the Blind for the privilege of working, through the Committee, on behalf of deaf-blind persons throughout the world.

MEMBERS OF THE COMMITTEE ON SERVICES TO THE DEAF-BLIND

France:	Mr Henri Gauvrit, Directeur Institution des Aveugles Les Eyquems, Merignac (Gironde), France
Netherlands:	Dr Gerrit van der Mey Vinkelaan 47 Dieren (gem. Rheden), Netherlands
United Kingdom:	Mr Arthur R. Sculthorpe, M.B.E., General Secretary National Deaf-Blind Helpers' League Market Chambers, Cathedral Square, Peterborough, England
United States Of America:	Dr Richard Kinney, Executive Vice President Hadley School for the Blind

700 Elm Street, Winnetka, Illinois 60093, U.S.A
Dr Edward J. Waterhouse, Director
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Chairman: Dr Peter J. Salmon, Administrative Vice President
The Industrial Home for the Blind
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LOUIS BRAILLE MEMORIAL COMMITTEE

By Monsieur Henri Amblard

At the New York General Assembly of the World Council for the Welfare of the Blind in 1964, Monsieur Raverat explained in an exhaustive and detailed report, the reasons why to his mind Louis Braille's birthplace should keep its character as a Museum. He felt that this spot should be the Centre to which the thoughts of the blind converge in a spirit of international gratitude for the contribution Louis Braille brought them over a century ago.

The wishes expressed by Monsieur Raverat have now been realised, and so far, many celebrities from all over the world have visited Braille's home—we should say Braille's shrine, paying a tribute to his invention.

After Monsieur Raverat's retirement we carried on our action so that this Memorial might be worthy of the interest it rouses in us all and it is with pleasure we note that various organisations join us such as The Canadian National Institute for the Blind, 'La Ligue Braille' from Brussels. Then too, Eric Boulter and I appealed to the Gulbenkian Foundation to grant us a subsidy for the preservation of Braille's birth-place which needed repairs badly. In July 1965 we received $3,500 and a second allowance of $1,700 was granted to us in February 1968. This important contribution proved very useful for the reorganization of this house and we are happy to tell you that its aspect is very welcoming and reveals the atmosphere prevailing in Louis Braille's home a hundred years ago, when as a child he lost his sight.

Other organizations have also sent subscriptions. The Seine-et-Marne Department gives us an appreciable grant each year and the Committee of the French Blind promised its assistance. In fact we have just received a sum of Frs.4,000.00 from them. All is now well on the way but we have to get new resources to meet the costs entailed by maintenance, upkeep and caretaking.

We appeal to you, My dear Colleagues, to make an effort to give this foundation its full significance. We are all very grateful to Louis Braille who gave us the means to develop our intellectual faculties and thus sometimes, to attain a good position we should never have had the chance to reach without Braille writing. We feel sure that in reminding you of the importance of maintaining the prestige of the Braille Memorial, we can be confident of your co-operation. The blind will thus be united in purpose toward that memorial which, as a light to show the way, may alleviate their darkness.

PROFESSIONAL SESSION 3 **Saturday morning, October II, 1969**

THE BLIND AT WORK

Chairman: **Don Ignacio Satrustegui,** *Director General of the Organizacion Nacional de Ciegos de Espana*

THE EMPLOYMENT OF THE BLIND IN PROFESSIONAL AND ADMINISTRATIVE WORK

By **Mr J. C. Colligan, C. B. E.,** *Director-General, The Royal National Institute for the Blind, England*

The subject of my paper possibly represents one of the most vital aspects of the theme of this Conference, which is the place of the blind in an age of science. For just as it is true that the blind may be helped, through the development of modern science and technology, to fuller lives, it is equally true that modern science and technology may offer hitherto undreamed of opportunities of employment at professional, technical and administrative levels. I see that it was not until ten years ago, on the occasion of the 1959 General Assembly in Rome, that the first reference to professional employment was made in a Conference Resolution.

In 1964 the New York General Assembly resolved "that a systematic search be made for new activities, accessible to blind people, and the best be made of those already in existence but not now used in some countries, such as physiotherapy, etc. . ." In the United Kingdom a good deal has been done, particularly over the past twenty years, to develop employment opportunities generally and I take it as a compliment to my country that I have been asked to open your discussion on this subject.

Out of a blind population of some 115,000, the overwhelming majority of whom are above or below employable age, we now have some 13 to 14,000 blind gainfully employed, but the most important factor of this is that of those who are employed about 1,400, *i.e.* some 10% of the whole, are employed in professional or administrative work.

In order to deal realistically and energetically with the placement of blind people in sighted employment, it is necessary to establish a specialist service to that end. It is no use relying upon Government or other Agencies that are not specifically concerned with the blind to achieve the goal to which we all aspire: the integration of blind people into sighted occupations (at any level) whenever that is possible. It is only the specialist Agency or Department which will best understand both the capacities, and the limitations of blind people and which is usually prepared to use wherever possible Placement Officers who are themselves either blind or visually handicapped. A comprehensive employment service should initially be capable of dealing with the employment of the blind at all levels, sheltered—industrial—commercial—clerical—administrative and professional.

Inevitably the time will come when it is possible to split the employment service into two or more categories, as was the case in 1963 when after more than twenty years of effort by the private Agencies, the British Ministry of Labour assumed full responsibility for the placement of blind people in industrial occupations, leaving the private agencies much freer to engage in research, investigation and placement into commercial, clerical and related occupations as well as to professional and administrative posts.

For the purpose of this paper I propose to regard all employment, other than sheltered and industrial employment, as coming within my terms of reference.

Before considering in any detail the mechanics of a professional employment service for the blind, it is perhaps first of all necessary to define the areas from which potential clients may come.

The first is obviously from the schools and universities irrespective of whether the young blind person has been educated to a higher grammar school level at a School for the Blind, or in some integrated systems within schools for the sighted. Invariably a large proportion of such young people would pass on to the University. The second area to be searched is amongst those who lose their sight whilst of employable age, particularly between the ages of 18 and 50, or occasionally, 55 years of age.

The next matter that ranks for consideration must be the type of blind person for whom one should look as potential placement in this type of employment. The British Ministry of Labour and National Service in the Report of a Working Party on the Employment of Blind Persons published in 1951, quoted the qualities for which our Civil Service Commission look in a successful candidate for employment in the Administrative Grades of British Government service:—

> "Intellectual ability of a high order and the ability to discern and analyse the essentials of complicated questions and to express himself with lucidity in speech and in writing; ability to get on well with all kinds of people; to be adaptable, far-sighted and persevering, and have enough strength of character and leadership to hold his own, take decisions, and exercise responsibility. He should have enough practical imagination to enable him to devise in

broad outline workable plans for dealing with an unprecedented situation. Above all, he should possess judgment and commonsense."

In considering the type of services that should be provided, it is, as I have already said, essential to ensure that the Placement Officer should himself or herself have the right background and thoroughly understand both the potential capabilities and limitations of blind persons just in the same way as a placing officer for the blind in industry must have or acquire an industrial knowledge and an ability to approach top management at the right level; it is equally essential that a placing officer for professional employment should have a professional background, a University or technical qualification and an ability to make contact with management, administration or academic direction at the appropriate level. Above all, he or she must possess an objective and an analytical mind. Desirable though it may be, it is not always possible to recruit blind persons as industrial placement officers who possess the appropriate qualities and, similarly, and perhaps to an even greater degree, it is not as yet always possible to find a blind person of the right qualifications and attitude of mind to work as a Placement Officer in the professional and administrative fields: though I feel it unnecessary to emphasise strongly to an audience such as this, that if it is at all possible, it is desirable to use a blind or visually handicapped person, if only from the point of view of a practical example of a type of client that they have in mind. I should perhaps remind you also that it is usually necessary to have selected the client before investigating the employment possibilities.

Although the private Agencies for the Blind in Britain have been officially engaged in placement of blind persons in sighted occupations for more than twenty years and, indeed, there are many examples of successful work by pioneers as far back as the second half of the last century; it was not until the assumption some six years ago by a Government Department for the placement and follow-up of blind persons in industry, that we had an opportunity to make a concentrated effort on the placement of blind people in commercial, administrative and professional fields. A recent survey has revealed that we have now reached the stage where about 10% of blind people in employment in the United Kingdom are engaged in these sort of occupations. A broad division of them reveals that we have a significant number of blind people working in each of the following:—writing and journalism, physiotherapy, social welfare work generally and particularly, social work for the blind; engineering technicians, general Management, Personnel Officers, Company Directors, accountants, architects, musicians or music teachers, shop proprietors, administrative officers in Government and Local Government Service, school teachers, University and Technical

College lecturers, Solicitors, secretaries, appeals and public relations officers, Ministers of religion, medical and allied workers and librarians.

Only a small proportion of these people were employed in any of these occupations before losing their sight and I ought to add that today we are somewhat disappointed if a person in the 20 to 55 year age range who loses his sight, is not reinstated in at least a related field of his or her former chosen profession.

There is obviously no time for me to speak in any detail about any one of the foregoing employment avenues for the blind, but I must say a word about two things in particular.

The first is the opportunity for promotion which exists from the commercial to the administrative field, particularly in the case of shorthand-typists. It is quite clear that those who have worked as shorthand-typists are effective people who have intelligently adjusted themselves to their handicap and who are also independent, practical, methodical and friendly persons.

These qualities, as with sighted people, can be used to draw attention to their potentialities and lead to their selection for promotion. Most of those who have been promoted use Braille intensively, but there are others who with a thick pen or pencil can read what they write, and all have found that the ability to type is essential. Some have been assisted by low visual aids; adding machines can be adapted, arithmetic frames are sometimes used, tape recorders and dictaphone machines are becoming more and more popular as are couplings to connect a telephone to a tape recorder. Telephone headsets, the Telepoise instruments and other models—some very simple—can allow a blind person to have both hands free when using the telephone (for example, to write Braille or to read notes), Braille filing systems, desk diaries, identification slips on papers. All these are part and parcel of the equipment used by such individuals.

To what sorts of jobs can shorthand-typists be promoted? Correspondence clerk, personal assistant, secretary are obvious possibilities. In all these jobs, a bare outline of a situation enables full replies to correspondence to be made and reports prepared. Even the position of typing supervisor has been undertaken. Committee work, with responsibility for the preparation of Agenda, Minutes and reports and for dealing with correspondence, has also been accomplished. If promotion of this sort leads subsequently to higher executive or administrative posts, then the experience already gained can be allied to judgment and intelligence in analysing problems, and the task will be easier now that there is likely to be secretarial help readily available, although there must always be the awareness of the need to ensure that the normal flow of work of the office is not interrupted.

Finally, it is apparent that those who have succeeded in getting up the promotion ladder have always put themselves out to do that little more than is essential. Although nobody is indispensable, some people are very difficult to replace. The survey undoubtedly indicates that, at administrative levels, blind people suffer the disadvantage of needing to have mail and papers read to them. At the same time, this is compensated for by the quality of their work and by the extra time they spend on their work, often at home, where much reading can be undertaken by relatives and friends.

The second point to which I would wish to draw your special attention is the remarkable and almost dramatic breakthrough which has been made in certain countries by blind people in the field of computer programming. Already in the United Kingdom, over 70 blind people are employed in the field and that number is steadily and substantially increasing. One or two have progressed from data programming to being systems analysts.

It should, however, be remembered that data processing is an occupation which is best suited to young people. Men and women in their 20's stand the best chance of satisfactory resettlement, although there have been a few exceptions of people with qualifications and experience which made them particularly attractive to the management of a computer installation.

Candidates should have a good education, preferably with a national certificate of education at advanced level. Education should have included a very good grounding in mathematics. A successful candidate must have a logical and analytical mind and, because of blindness, it is essential the candidates should be expert in both braille reading and writing and skilful in the use of a typewriter.

Before a person can be considered for training, it is necessary to establish that he has the aptitude for computer programming and for this to be done candidates should be referred to the sponsoring organisation who must have available carefully selected test material specially orientated towards computer programming.

The major problem for a blind person in data processing is communication and three examples of the way in which this is overcome are given here:—

(*a*) It is the job of the Systems Analyst to define the problem or job which is to be undertaken and normally he would specify his intentions to a sighted programmer in written form. Such specification will normally include flow diagrams, etc. The use of a tape recorder enables a blind person to receive a dictated specification which he can transcribe into braille for his own use and a blind programmer employs a special flow charting technique using index cards instead of "boxes."

(*b*) A sighted programmer will write his logical thoughts for the programme in order that they can be checked by a colleague. Subsequently he will write out his programme in coded form so that it can be punched on to tape or cards by the data preparation staff. The blind programmer uses a typewriter to overcome these two difficulties.

(*c*) The third area of communication difficulty is related to the machine. Communication from the computer is via the line printer which churns out yards of paper at a very high speed. Fortunately, it has now been possible to obtain a standard braille output from the line printer of a computer. Special programmes have been written which operate the full-stop character only to print braille dots in their appropriate positions. It is necessary to turn up the pressure control on the printer and insert a piece of soft backing material in order that the full-stop character can actually emboss the paper. It must be made clear that this does not require a specially designed line printer, nor is the modification to the standard printer permanent. In fact, it is a very easy adjustment to the printer which can quickly and easily be made as and when a braille print is required. It can be carried out by the operator in a matter of minutes and does not need the site engineer.

It is obviously necessary to set up special training courses in computer programming for the blind. Usually it is the high level programming language that is used although some programmers are now actually working at a low level language using manuals which have been recorded on to tape.

As well as providing Braille notes for computer courses, it will be necessary for someone to undertake the brailling of Training and Reference Manuals which is a task of some considerable technical difficulty for the braille transcriber. Occasionally, where appropriate, it is possible to make recordings on audio-magnetic tape. The potential blind Computer Programmer must also be supplied with an Upward Braille Writer, a tape recorder, a typewriter—modified to computer type—and a punch card reading aid. This may appear to be an expensive list of equipment but it can be well justified by the high rates of pay which are earned by the trained Programmer.

To return to the broad theme which is the subject of this paper. In general terms a wide variety of training facilities must be available to those who hope to work in the professional or administrative fields. In addition to higher grammer school and University education there must be facilities at sighted Training Colleges, at Commercial Training Colleges for the Blind, at Schools of Physiotherapy and in the establishment of Computer Training Courses, exclusively for blind trainees.

The problem of providing vocational guidance for the intelligent blind school-leaver must also be tackled realistically. There must be a link between all those concerned with the visually handicapped adolescent through further education and training and finally to employment. There must be those who are prepared to investigate new fields of professional employment and to provide authoritative and accurate advice on careers. They must also be able to advise and where necessary to assist with the solution of academic problems created by blindness and particularly in ensuring that blind students derive maximum benefit from academic and social life at University or Training College.

Vocational guidance should start at School. The School staff, the Youth Employment Officer, the parents and the blind Placement Officer must all be involved. The young person must be given opportunity to gain practical information by outside visits, by talks and to have access to careers literature. Then when the time comes to leave school, the majority will have some idea of their ultimate goal. Many will go on to University and Training College and contact must be made there to ensure that ways are found by which the blind person can study under normal conditions.

As soon as a place has been promised, preparation must start to ensure that the essential books are available either in Braille or on tape and that help shall be forthcoming if necessary in the organisation of sighted readers as well as in the supply of any necessary equipment.

Career opportunities for the blind graduate are constantly widening. At British Universities there are at present blind students reading such hitherto unusual subjects as economics, geography, anthropology, physics, mathematics and electrical engineering. Provided they have the necessary equipment for the job, the range of opportunities will go on expanding. Once qualified there is sometimes a need for the association of groups of blind people within their chosen profession. For example, there is an Association of Blind Chartered Physiotherapists and there is now in the United Kingdom a special group of blind Programmers within the membership of the British Computer Society.

It will be noticed that I have not in this paper mentioned blind welfare as a field of employment for blind people at professional or administrative grade. I have done this advisedly because I think the opportunities are too well-known and sometimes too well used with the result that there is a natural tendency to think that blind welfare provides the first and sometimes the only opportunity of professional or administrative employment of the blind. The result can be that it proves to be an overcrowded profession but in any event our intention must always be so to integrate the blind within the sighted community at all levels that we shall have emancipated our blind population to the extent where blind welfare is no longer a scheduled or sheltered occupation and that those who have the ability and the will to do so shall take their place side by side with the sighted in the field of employment at every suitable level.

INDUSTRIAL EMPLOYMENT

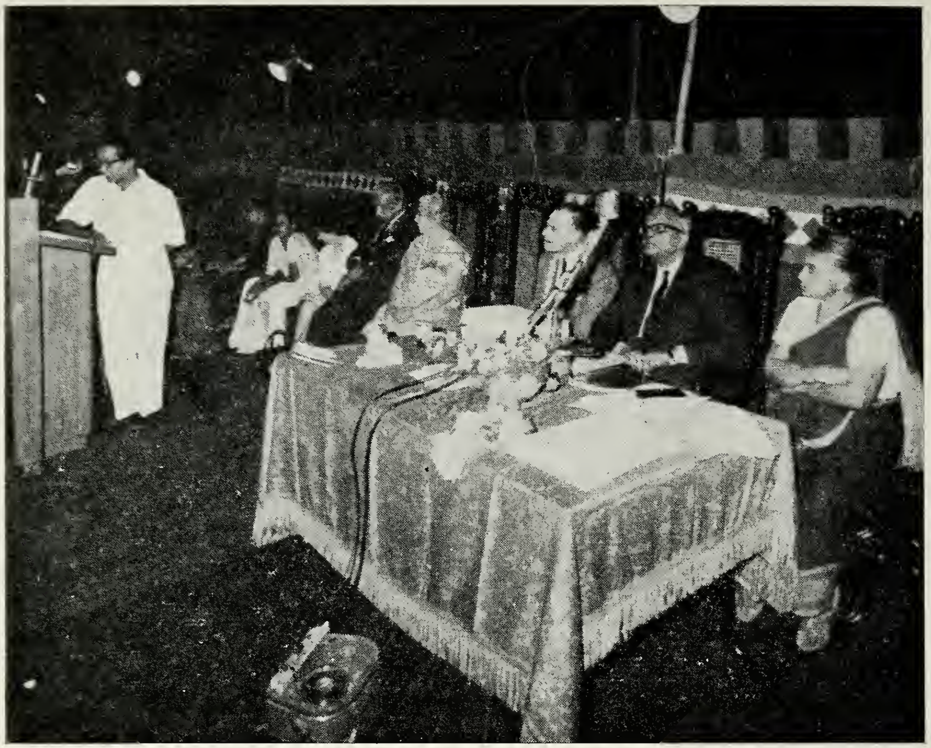
By **Mr L. H. Rives,** *Social and Rehabilitation Service, Department of Health, Education and Welfare, Government of the United States.*

It is estimated that there are more than 420,000 blind persons in the United States today. Fifty per cent of this number are beyond the working age, and at least 10 per cent have not reached the working age. An additional 10 per cent are multiply disabled to the extent that we doubt if present-day knowledge and resources can assist them to become employable. Twenty-five per cent of the blind population are in some type of employment (including housewives or other family workers). This leaves 5 per cent or slightly more than 20,000 blind persons in the active caseload for vocational rehabilitation services.

It is important that we structure our plans today and in the future to enable this group of blind persons to enter into or to return to gainful employment. It is even more important that we develop our programmes and extend our services in such a way as to care for the potential rehabilitants. Each year in the United States it is estimated at least 40,000 individuals lose their sight. Following the pattern indicated above, 20,000 of these are 65 years of age or older and 10,000 have not yet reached the working age, or are so severely disabled that current programmes cannot assist them in employment. This leaves at least 10,000 newly-blinded persons each year who have the potential and capacity to enter or to return to gainful employment. Our plans must also consider the above mentioned backlog of more than 20,000 blind persons who are employable, and our ultimate aim in vocational rehabilitation services must be to include every newly-blinded person who has the desire and ability to participate in gainful employment. As you can see, we still have a lot of work to do in overcoming the many hurdles that lie ahead of us on the way to achieving this.

With the passage of the Barden-La-Follette Act in 1943, services to the blind received a new impetus in America with the inclusion in the State-Federal vocational rehabilitation programme of services to blind persons. While it is true that blind persons were eligible for vocational rehabilitation services before this time, the law provided new expansion of services to all disabled individuals in such a manner as to enable the development of a sequence of services especially aimed at the

Mr Charles Hedkvist
Newly installed President of the WCWB



Blind Relief Association, New Delhi, Silver Jubilee
from l. to r. Dr C. D. Deshmukh, Mrs Q. H. C. Captain, Mr E. T. Boulter, Dr A. N. Jha (Lt Governor of Delhi), Dr (Mrs) Durgabai Deshmukh. *Speaker*: Mr K. N. Nayar

At the Registration Desk, Vigyan Bhavan

Dr C. D. Deshmukh opening the WCWB Exhibition

The National Centre for the Blind, Dehra Dun Stall at the WCWB Exhibition. Mr J. C. Colligan seen with Mr G. P. Sharma

from l. to r. Mr P. Govinda Menon (Minister for Law and Social Welfare), Mrs Indira Gandhi (Prime Minister of India), Mrs Q. H. C. Captain and Mr E. T. Boulter.

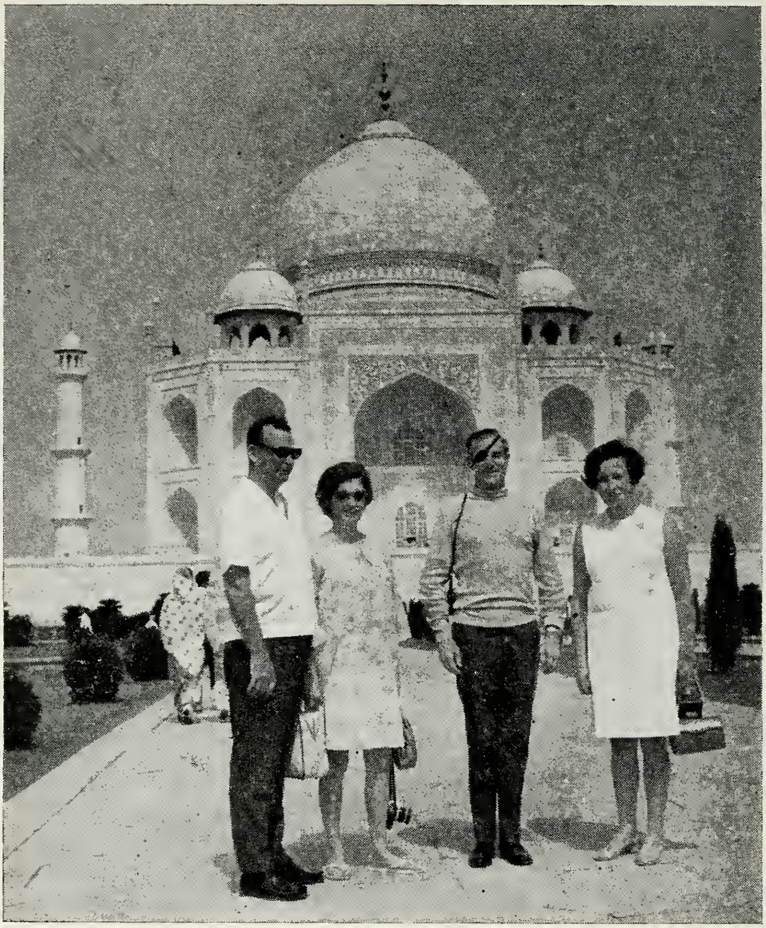
Dr (Mrs) Durgabai Deshmukh, Mr E. T. Boulter and Mr and Mrs Suresh C. Ahuja receiving Mrs Indira Gandhi

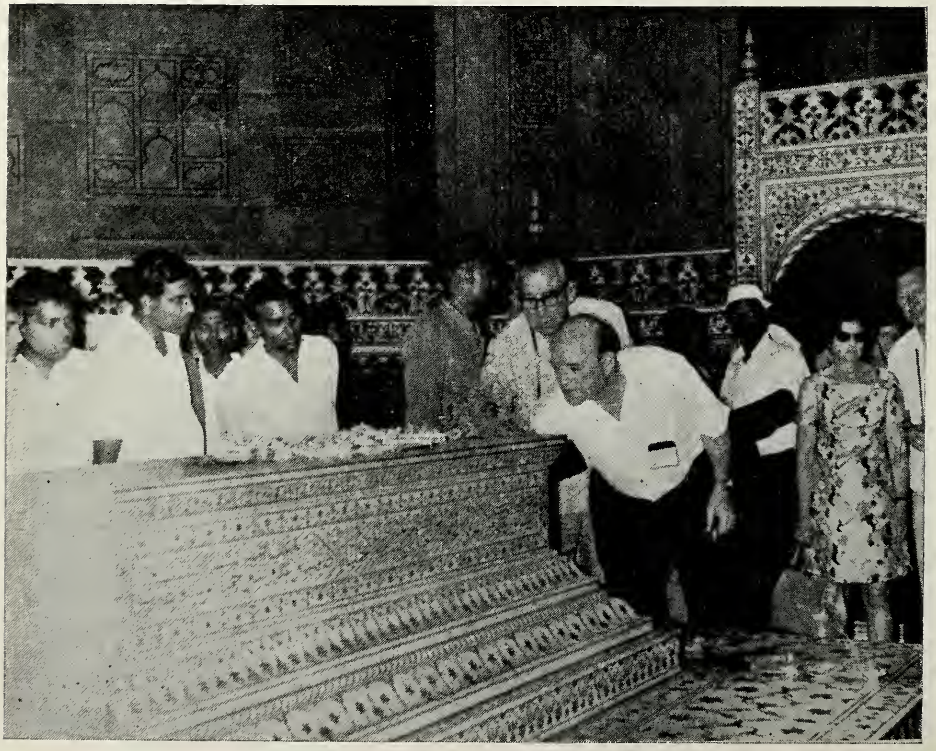
INAUGURATION

from l. to r. Monsieur H. Amblard, Mr P. Govinda Menon, Mrs Indira Gandhi, Mr E. T. Boulter, Dr (Mrs) Durgabai Deshmukh, and Mr John Jarvis

Some of the participants

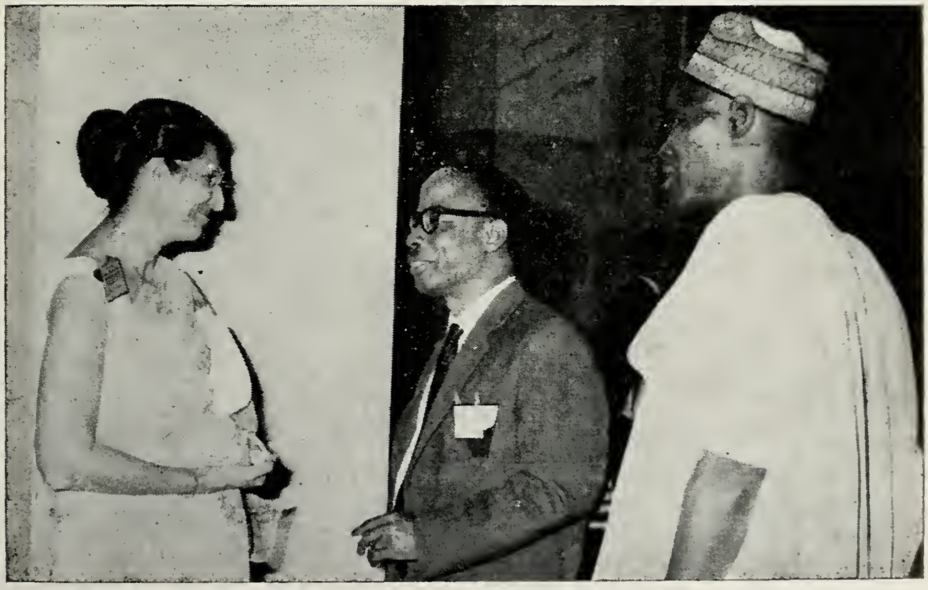
At the Taj Mahal, Agra





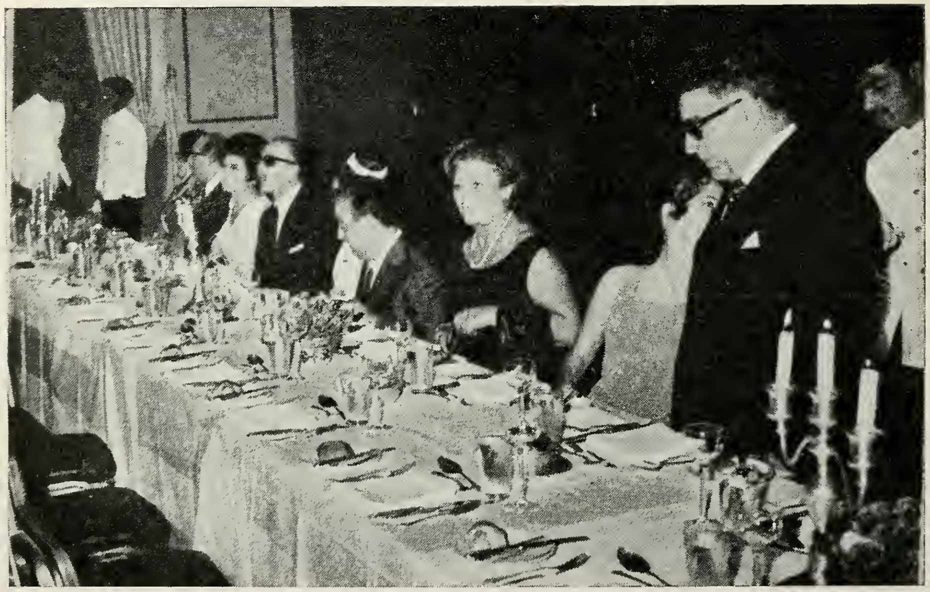
At Rashtrapati Bhavan

Mr E. T. Boulter meets the President of India Mr V. V. Giri



Mrs Y. K. Wadia, Dr Cookey-Gam and Mr Tanko Soba at the Reception given by the President of India

At President Boulter's Banquet



handicap of blindness.

The Rehabilitation Services Administration (formerly Vocational Rehabilitation Administration) during the more than two decades since the enactment of this legislation, has been committed to an ever-increasing effort to develop methods and techniques which can enable persons to compete in the world of work as well as society. Public Law 565, signed into law in 1954, gave additional tools to the Rehabilitation Services Administration in the areas of personnel training and research and demonstration. Services to the blind throughout the country have benefited during the past 15 years from the advances which have resulted from the many efforts in short-term and long-term training programmes and research and demonstration projects.

In looking back over the past 20 years, it is easy to note tremendous progress in placing blind persons in employment situations. In fact, through the State-Federal vocational rehabilitation programmes alone, the number of blind persons either entering in or returning to employment each year has had a 7-fold increase.

Today, there are nearly 40 thousand identifiable occupations in the competitive field of work, and it is gratifying to note how widely blind people have fanned out into this great industrial complex.

The industrial revolution began approximately 200 years ago and it is not yet complete. Three phases have succeeded each other during this time : one, the bringing together of men into factories ; two, making machines to do the work of men ; and three, arranging the work so that the men guiding the machines could do so with the least amount of effort. We are now in the midst of the fourth major step of this industrial revolution : that of making machines that run themselves, feed themselves, and turn out the finished product. This phase in our economy is usually referred to as automation. With an ever-growing sophistication in machinery and its arrangement in our manufacturing, we will move deeper into the era of automation. No one can truly predict the length of time or nature of the next major step in producing the various items needed and wanted by man. Much has been written about the twenty-first century in the era or cybernetics and perhaps it will be during this century that this phase of our economy will be recorded in history as having begun. Even though our industrial processes are highly mechanised and extremely sophisticated, automated machine tools come into being, we still have a long way to go before we can say we have moved to this next era. During the 1960's, each year has noted an increase in the number of people employed in the United States. At the present time, it is estimated that 76,000,000 people are fully employed in the country. By 1980 we will have reached the 90,000,000 mark and by the beginning of the twenty-first century, we should have well over 100,000,000 individuals employed in the Nation. Even though the rate of percentage of jobs in manufacturing concerns is decreasing in comparison to the total number of employment opportunities in the country, this phase of our economy continues to offer employment to the majority of workers in America. Mechanization, it is true, has enabled our manufacturers to produce more goods with fewer man hours ; however, our imagination, ingenuity, and competitive system have created many new products and, with the rising standard of living, demand has kept pace. At the outset of every major phase in our industrial development, there has been the real concern (primarily on the part of labour) that jobs would be eliminated and that machines would replace individuals and create great unemployment. As our society has adjusted to automation, the clamour against this development has eased. However, even today, there is much discussion with regard to new production methods and advanced equipment creating a serious unemployment problem. So far in every instance, the concern has not been valid. Rather than creating a large body of unemployed workers, industrial know-how has actually increased the number of jobs available in the land. In fact, this year there will be more new jobs created than there are individuals newly coming on the labour market. Jobs in industry are changing ; old ways of producing materials are giving way to new and more effective resources. Training and skill requirements of workers are more demanding. In many instances, this necessitates re-training of workers for new positions. In other instances, it means an actual shift from one industry to another, but Americans are generally a highly mobile people and adjust to these requirements as they develop. The history of employment of blind persons in industry in large numbers is, of course, short in comparison to the overall industrial revolution. Consistent growth in the ranks of these employed people has only been since the early 1940's during the Second World War and thereafter. For example, during the 1960's, the number of blind persons entering competitive employment has doubled, and the highest category of employment has continued to be in the industrial or manufacturing segment of our economy. The kinds of jobs they are performing are continually changing and the requirements for performance are on the increase. Thus if we are to maintain our standing in the competitive labour market, we must constantly plan for improved vocational preparation and must better prepare professional personnel performing the selective placement process for the blind. Our Nation is now concerned with the development of more effective trade technical training resources and strengthened manpower programmes for workers in general, and it is even more essential that we gear our programme of services to the blind to keep pace. No longer can we prepare our clients for today's job only. We must give them the kind of training and develop the skill needed for employment tomorrow and five years hence.

Blind persons continue to find satisfying employment in our factories today. In 1967, 976 individuals were placed in industry through the State-Federal vocational rehabilitation programme. In fiscal year 1968, this number increased to more than 1,100. In planning our selective placement training programme of counsellors, one of the more significant changes we had noted is the requirement of flexibility in factory workers. Personnel practices and sound production management have amply demonstrated the value of moving a worker from station to station rather than requiring him to stay at the same job hour after hour, day after day. This movement of personnel within the plant has increased the productivity of the worker, has improved his satisfaction with his job, and has lengthened his time of employment with an employer. In noting this trend, we have found it necessary to prepare our clientele to perform a number of operations rather than just the single task. In seeking employment opportunities for blind persons, our counsellors are forced to make a careful evaluation of many jobs within a company, choosing those that can be done without sight and which will not create a drastic change in the normal shift of employees during the working day. While this requires a more careful selection of both the worker and the job, it is proving not to be as formidable as we feared a few short years ago. Blind persons, properly trained and placed in the right employment setting, are proving to be as flexible as their fellow workers with the one exception that they still must do those jobs where sight is not an essential factor. Fortunately, there are still more of these openings than we have clients prepared to fill them. The basic secret to success continues to be a vigorous dynamic selective placement programme involving professional people with initiative, imagination, and ingenuity, and above all, confidence in the products they are bringing to employers as well as belief in the fundamental soundness of this programme.

At the present time, the computer is receiving primary consideration as the tool of automation. In the past decade the number of computers in the United States has grown from 500 to 100,000 with a monetary investment developing from $ 20 million to a present capitalization of $ 12 billion. One of the interesting phenomena in this increase in computers is the fact that at least two-thirds of the growth has taken place in the past three years. This emphasizes the accelerated nature of this phase of automation.

The computer is only one of the many families of automated tools that will change our world of work as we know it today. There will be drastic changes in industry such as the numerically-controlled machine tools and tape-controlled equipment.

During the next few decades, these innovations in manufacturing processes will, of course, change our whole concept of industrial production. Instead of developing a large inventory of consumer item parts, tapes will be stored which can readily be shipped to a particular area of the country as the parts are in demand and can then be reproduced on similar automated machines in the immediate locality of the need. This means, in essence, that instead of shipping parts of products, factories can be shipped.

We have no list of jobs for the blind. We are convinced that the formulation of such a list would be much more limiting than any help it would give. Instead, we would like to indicate some types of occupations and jobs in which blind persons are now performing.

A number of blind persons are being trained and are securing employment in the trade technical areas. For example, a few years ago the School of Science at Wahpeton, North Dakota, undertook a research and demonstration project sponsored by the Rehabilitation Services Administration, aimed at demonstrating the effectiveness of providing trade technical training to blind persons in a particular region. Two courses were initiated, each of two years′ duration : one in machine-shop work, and the other in small engine repair and maintenance. The machine-shop course was started during the first year and the small engine mechanics course commenced at the beginning of the second year of the project. The first class of machinists graduated in June of 1965. Five of the six graduates are now employed as machinists in such plants as John Deere, Cessna Airplane, General Electric, and in two instances in small job machine shops. Seven students graduated in 1966, four from the machine shop, and three from the small-engine mechanics course. In each instance, these individuals are employed in accordance with their training.

The fastest growing occupational area in the United States is that of providing services to people. Through mechanization, the American worker is finding that it takes fewer hours to produce the consumer items in demand and he has much more leisure time. This, coupled with an affluent society, creates the desire and the demand for many types of services—not only of the recreational nature for the vacationer, but in the home, at work, and, of course, at play. During the next 20 years, we will see at least 6,000,000 more jobs open in the service occupations. Blind persons throughout the country are taking their place in this type of endeavour. Last year alone 20 per cent of the individuals placed in competitive employment were in service occupations—ranging from automatic dishwashing operator, and surgical tray-packer in the central supply room of hospitals to telephone service jobs, employment in laundries, and in kitchens of restaurants and hotels, and so forth. A number of blind persons are employed as recreational therapists. Blind persons are performing in a wide range of employment situations from the unskilled to the professional.

For the sake of general information, we should cite a number of examples in which blind persons are performing valuable services to the public as well as earning a self-supporting wage for themselves and their families. Most American families own automobiles today and in many instances they are equipped with automatic transmission. This equipment has become so prevalent in the automobile industry that throughout the country special maintenance and repair centres for automatic transmissions are in operation. A growing number of blind persons are now being trained and placed in these centres performing bench type jobs where sight is not an essential factor. A number of trade schools teaching automobile mechanics are now offering special courses in automatic transmission repair and have accepted a number of blind trainees in their regular curriculum.

Another occupational area deserving our attention with regard to future planning is the rural recreational industry. It is estimated that this rural industry will be employing, full time, 1.4 million individuals by 1980. This means an increase of over 700,000 new jobs in the next 10 years.

In the clerical field, blind persons are finding their share of opportunities in such jobs as telephone operators, receptionists, typists, retail sales clerks, and many others.

For many years agencies serving the blind have been training medical records transcribers; however, the number has been relatively few and job opportunities were often difficult to secure. With the new requirements for maintenance of medical records and the increase in the number of hospitals with sound recording equipment, the demand for medical records transcribers has far outstripped the current supply. In most instances today, the medical informational material is recorded through sound equipment which makes this job a natural for the trained and qualified individual without sight. Now we have an unusual worry in that we have more job openings than we have trained blind medical records transcribers.

Soon there are many jobs which will no longer exist, but there will be completely new jobs for which we must be prepared to train our clientele. Blind persons, like our sighted colleagues, must have a basic educational background which will permit their skills to be readily convertible in re-training programmes. If it is true that the sighted worker of the future will require re-training at least 6 times during his work period, it will be even more imperative for the blind person in the competitive labour market.

The communications industry is merely one example of the way in which our plans must be directed. There are examples for all categories of work ranging from the professional to the unskilled.

In developing a counselling programme for those clients who will be coming to us for services in the future, the conusellor must be prepared to provide the type of assistance that will not merely consider occupational information of a current nature, but he must have the knowledge and skill to assist the client in planning for the type of jobs which will be available for many years to come.

We have merely scratched the surface and not given a detailed description of how blind persons are now being trained for and placed in many industrial, clerical, and service occupations. However, we believe you can note the significance of the progress made during recent years. Blind persons at work in many communities throughout our land take pride in their chance to perform, for they know this is the avenue to even greater progress for all blind people now and in the future.

AGRICULTURAL EMPLOYMENT

By **Dr. J. W. Cookey-Gam,** *Nigerian National Advisory Council for the Blind, Nigeria.*

The ultimate goal of any rehabilitation programme, no matter what the disability or handicap, must be to prepare the individual physically, mentally, socially and vocationally for the fullest possible life compatible with his ability and disability. For the purpose of this paper, the emphasis is on vocation. In a world where unemployment presents a most formidable problem, the question of employment for the staggering number of the disabled must be a constant source of anxiety—indeed a nightmare. It is little wonder therefore that Employment should feature so regularly in all the Assemblies of this world body it has been my privilege to attend or read about.

Agriculture in the national economy

It is true to say that the economy of most of the developing countries in Asia, Africa and Latin America is more than 90 per cent dependent on agriculture ; in Ceylon it is about 70 per cent whilst in South Africa it is about 55 per cent. In the United States which is highly industrialised, about 6.7 per cent of the population are engaged in agriculture. From these scanty statistical data, it is very suggestive that Agriculture could be a very potent source of employment for the disabled including the blind. The problem that arises, however, is the matter of mechanisation. For obvious reasons, the more mechanised the agricultre, the less likely are the blind capable of being absorbed in agricultural pursuits. In Canada for example, the labour force in 1946 was 25 per cent ; this figure will be reduced to less than 10 per cent by 1970. Besides, the high cost of the equipment needed and the desirability of having large tracts of land to run profitably, make it impossible for blind people to enter agriculture. It would seem, therefore, that at best "primitive agriculture" is all that will be possible for the blind for a long time to come. Be that as it may, the Royal Commonwealth Society for the Blind has shown quite conclusively in the last decade that for the thousands of destitute, illiterate blind in the rural areas of the world, FARMING is the only hope of bringing independence and a fuller life.

During the past ten years the R.C.S.B. has helped to establish 26 farm training centres in 12 Commonwealth countries. The first rural training centre was established in Nigeria in 1956 and in Uganda, and Tanzania about 1959. In 1964 a 1,000 acre farm was established in KAMBOWA in Zambia.

Agricultural Pursuits

The scope of agriculture is very wide indeed. The limiting factors as far as the blind are concerned are—degree of blindness, age and physical state, effective mobility, educational level, availability of land and capital.

Those having residual vision can successfuly work as milkmaids, calfwomen, pig-drivers, shepherds, stable-men, carpenters, indoor watchmen, labourers in hot-beds and in greenhouses. Completely blind people can work as coopers or saddlers, basket weavers, broom makers, sew or mend sacks, sort vegetables, pack grains.

When land and capital are available, the growing of cash and food crops are possible as well as some poultry farming. For instance during 1964, the 1,000 acre farm at KAMBOWA in Zambia where 80 students were in training, produced 30,000 gallons of milk, 100 fat lamb, 75 tons of vegetables including 50 tons of tomatoes, small quantities of maize, cotton and citrus. Also, the Nigeria Farmcraft Centre for the Blind, Ikeja, Lagos, where 30 trainees worked, the following harvest per acre(cultivated part of the 63 acre holding) was recorded in 1964 :—

Urena Lobeta ..	968 lbs.
Cassava ..	5,080 lbs.
Yams ..	9,522 lbs.

an appreciable quantity of groundnuts, tomatoes, vegetables etc. while the maize and pineapple yields were sufficient to meet the needs of the Centre.

In the centre at TEMERLOH in Malaya, the emphasis is on rubber cultivation, and it is quite possible that many suitable jobs for the blind can be found in the numerous rubber plantations in various rubber growing countries.

As education of the blind grows in scope and depth, so will more and more blind people find employment in the field of agriculture. In South Africa one student was admitted into the Agriculture College and is now employed in the field of artificial insemination. It can be said then, that the growing of food and cash crops like vegetables, citrus, banana, maize, yams, potatoes, rice, coconut, coffee, tobacco, rubber, cocoa, tea, fodder etc. ; dairy farming ; beef cattle farming ; poultry farming ; rabbit farming ; swine farming etc. provide avenues from supplementing an INCOME to earning entire livelihood from such ventures. The establishment of farm institutes/settlements is the most effective way of integration into society and Agriculture and should be encouraged.

Training and Research

The knowledge gained in the past ten to fifteen years in this field of employment has been by trial and error and I feel that the time has come for a systematised study of the potentials in the field of Agriculture for the blind. It would appear that the Soviet Union is the only country where extensive research into the work of blind people is being carried on by the Central Institute of Labour Expertise and Employment of the Blind. Such studies will involve an expert examination of the curricula and requirements of farm institutes ; an investigation into the design of simple and more effective tools *e.g.* a NUT-CRACKER and eventual classification and evaluation of the types of jobs most suited for the blind in the field of Agriculture.

In conclusion, I would like to take this opportunity of thanking those of my colleagues in this Council who responded to my questionnaire.

EMPLOYMENT IN WORKSHOPS AND OTHER SHELTERED OCCUPATIONS

By **Capt. H. J. M. Desai,** *Honorary Secretary, The National Association for the Blind, India.*

At the outset, I would reiterate what I said at the New York General Assembly while presenting my paper on "Rural Employment". It is my firm conviction that all avenues of securing congenial and remunerative employment for the blind should be simultaneously explored so that the maximum number of blind persons of different abilities, aptitudes, achievements, training standards and with entirely different problems are gainfully settled in life.

In this august Assembly, every delegate knows all that is worth knowing about Employment in Workshops. I would, therefore, briefly touch on a few pertinent problems which have exercised my mind.

Objectives of Services for Adult Blind

Broadly, the following services aiming at the total rehabilitation of the adult blind are available in most countries with suitable modifications :

(*a*) Diagnosis, Evaluation and Assessment ;
(*b*) Adjustment, Orientation and Rehabilitation ;
(*c*) Vocational Rehabilitation and Training preparing Clients for fully productive work ;
(*d*) Production on commercial lines in Workshops, Production Units, Open Competitive Jobs, Industrial Home Work, Small Business Enterprises or in Self-Employment.
(*e*) Social Rehabilitation.

The motivation and objectives of every project or service would differ. Similarly, the standards of achievements of each client would also differ. Nowadays, a multiplicity of institutions pass under the name of "Workshops." Quite a few have one or more of the services referred to combined into one unit. Thus, the objectives are not clearly indicated by the nomenclature of the institution. The terminology used to describe institutions is so different and confusing that it is difficult to clearly visualise what their aims or objects are. I would, therefore, urge for standardisation of the nomenclatures used for describing institutions for adult blind. Perhaps the Urban Employment Committee of the World Council for the Welfare of the Blind can help in evolving a standardised terminology.

The services listed at (a), (b), (c) and (e) have purely training or welfare aspects as their objectives. The services listed at (d), namely production on commercial lines either in exclusive Production Units, Industrial Home Work, Small Business Enterprises, Self-Employment or in Open Competitive Employment, are essentially business or commercial activities and the welfare aspects are purely incidental. In this paper, I shall concentrate on Workshops which are Production Units endeavouring to work on normal commercial and business lines.

Modern Trends

All over the world, the modern trends are in favour of Workshops which are run as business enterprises or commercial concerns. Blind Welfare Work has now reached a stage where it cannot afford to run Workshops purely for providing work experience or a Welfare service. Welfare organisations would always be motivated by compassion, sympathy and charity and would not give the "productive blind" the satisfaction of independently or fully earning their living. The time is now ripe for all of us to have a fresh look at the objectives and the organisational set up of all our Institutions passing as Workshops the world over and to take early steps for redefining their objectives, re-orienting their outlook and re-organising them on sound business lines. This is the only way the *bona fide* Workshops can survive in an age of science and of great specialisation.

Need for Production Units

With increasing automation, great specialisation and ever rising labour costs, the employment of the blind in open competitive employment will present increasing difficulties in the years to come. Industries expect an employee to work with commercial speed and efficiency on a wide variety of jobs or machines. Whenever there is not enough work-load on any job or machine, the worker is shifted to another job or machine where he could be profitably employed. Our training hitherto has been mainly for unskilled or semi-skilled repetitive jobs. Unless we change our existing pattern of training and train the blind for skilled production jobs on a variety of machines obtained in modern industry, it would be difficult to employ them in adequate numbers in open competitive employment in the years to come. The need for Production Units running on sound commercial and business lines, working on modern plant and machinery and fabricating a wide variety of products, is, therefore, obvious. It would also help develop employability and prepare clients better for placement in open competitive employment.

Organisation of Production Units

In all efforts at finding work for the blind, the changing patterns in the employment market have to be taken note of and the best system to suit local needs adopted. The prevailing trends in open competitive employment should alwavs be given great weight.

Ideally, it would be advisable to have exclusive institutions for each of the services referred to. Where, however, difficulties of finance, accommodation, organisation, etc. make this impossible, it would be advisable to have separate units in the same institution working in the utmost co-operation and in great co-ordination.

In organising Production Units, sound business practices must be adopted. The top management which should establish policy and exercise general supervision should have a reputation for the highest degree of ability, versatility and specialisation in diverse directions. The man at the top should be endowed with great imagination, initiative, skill, ingenuity, ability to develop resources, and with a sense of dedication. Specialised knowledge and expert ability in various fields must find a place in top management. Only a combination of technological advances, scientific practices and modern management would give a good start to a Production Unit.

As in private industry, expertise in diverse and varied fields would be necessary to make a Production Unit successful. Expertise in planning, innovation leading to growth and progress, financial management, organisational set up, plant and machinery, marketing, costing, accounting, administration, human relations, quality control, taking of risks—these and a variety of other skills used in modern industry—would be necessary if our Production Units are to aim at economical and effective adhievements of their objectives. A sound organisational structure, following accepted industrial and commercial practices, is essential. It should be our constant endeavour to strive for a competitive status in open industry. Selection of clients, staff, and contracts, planning the organisational set up, commercial production—all will be influenced by these criteria. In an era of great specialisation, Production Units would have to be organised with the sole objective of giving full commercial returns, output, efficiency and profits. Clients should be able to fully meet the competitive requirements of industry

Sheltered workshops or occupations having the welfare aspect mainly in mind should be reserved exclusively for the severely disabled or for the blind with multiple handicaps.

Professionally Qualified Staff

The Works Manager should be technically qualified, should have specialised training and all round competence and should be able to provide leadership of the highest order.

It is of the utmost importance that all Production Units—and for that matter even all training units—should have professionally qualified and fully trained staff of the best calibre. A common mistake which we all make is to go in for second rate low paid staff—not quite up to the requisite standards—thinking that the second best would do for the disabled. This is a grave mistake. If commercial production and efficiency are to be achieved, it is imperative that only the very best qualified and professionally trained staff is engaged. We should also continuously endeavour to keep the staff abreast of modern techno-industrial developments, advances in the science of management, human relations, etc. by deputing them to Refresher courses or observation tours. The staff should be paid salaries and given other benefits comparable to those obtained in normal industry.

Blind Client

Even while running a Production Unit, it is always to be borne in mind that the blind client is the most important person. He must get a full living wage and all other normal benefits, including terminal benefits. Quality goods of accepted standards are expected from him. His difficulties or problems will have to be given due weight and solved. Where necessary, safety guards, gadgets, dies, jigs, fixtures, etc. will have to be evolved with a view to accelerating his production, increasing his work efficiency, ensuring his safety and minimising fatigue to him. All such adjustments will have an element of normal human relations and welfare practices obtained in open industry. We should not hesitate to spare clients for open competitive employment on the ground that production in the unit would suffer. The clients' interests must come first. The client must also fully reciprocate by giving not only his utmost co-operation but by maximising his production and by turning out quality products with commercial efficiency.

Contract Work

Experience has indicated that in almost all plants and factories in open industry, there are a very large number of packaging, assembly, inspection and fabrication jobs which are simple and repetitive and on which the trained blind can give commercial output and efficiency. Even on sophisticated production jobs, full commercial proficiency is possible with sound basic training. Thousands and thousands of such jobs could be listed if proper surveys of industrial plants and factories are carried out. These contracts are mainly for bulk requirements. A number of them are quite remunerative. No special difficulties are experienced by the blind in executing such contract work. The Production Units have not to bother about the purchase of raw materials as the items to be assembled or fabricated are given by the industry. Sometimes, even the machinery is given by the industry. An added advantage of the contract system is that the trained blind clients who give commercial output and efficiency could be absorbed in the same industry on the same jobs which they have successfully executed at the Production Unit.

A Production Unit should also establish excellent relations with various Manufacturers′ Associations, Chambers of Commerce, etc. and should arrange for the periodical visits of their Members. This would establish a rapport with industry and ensure a steady flow of bulk orders of the right type.

Machinery and Equipment

It is imperative that our training units as also Production Units be fully equipped with modern plant, machinery and equipment. All machines as are required for a similar normal factory should be made available to training and Production Units. Intensive training on Fly Presses, Power Presses, Drilling Machines, Hacksaws, Shaping Machines, Capstan Lathes, Central Lathes, Milling Machines, All-Cut Machines and similar other machines, should be given to the blind to give them a thorough knowledge of working on different machines which obtain in normal Light Engineering Plants and Factories. Whereas a client should specialise in working one or two machines with top efficiency, he should also know how to operate all other machines and should be able to gain speed on them within a minimum given time.

Costing

A Production Unit can work profitably only if commercial practices of cost analysis are followed. Before a contract is accepted, costing has to be done. It is to be ensured that the job will pay. It is futile to approach the industry on compassionate grounds. Where necessary, trial orders could be taken with a view to working out the cost per unit and with a view to seeing whether the contract would turn out to be remunerative. On completion of the job, a review has to be taken of the costing done with a view to seeing whether in actual practice, the costing has worked out as anticipated. If the costing at Production Units manned by the blind has to stand a chance in open competition, it is essential that the products are made at competitive rates after knowing the market trends. With a view to be competitive, it is essential to look out for bulk orders spread all over the year so as to keep all the workers gainfully occupied all the year round. Utmost economy in the purchase of raw materials has to be observed and the management must know where to buy what at competitive rates. It has to be ensured that "Rejections" are kept to the barest minimum. Modern standards of quality control and inspection to suit the needs of the customers are to be adopted.

Production Units Run by the All-Russia Society for the Blind

Recently, I came across the 1967 Report of the All-Russia Society for the Blind. I would like to share the information I gathered from this Report with the distinguished Delegates of this Assembly. The Report emphasised that the Russian Federation had fully solved the problem of employment for the blind and that conditions were created whereby any blind man wishing to work can get a job either at one of the Society's training-production centres, a state factory or at a farm. At the end of 1966, there were 76,500 blind people working somewhere in the Russian Federation. The break-down was as follows :

—53,000 people working at the Society's enterprises or organisations,
—13,800 people working at state factories and offices,
— 9,100 people working in collective and state farms,
— 600 people attending higher and secondary special educational establishments.

The Report also emphasised that the Society's experience showed that the best form of employment for the blind was offered by the Society's training-production centres where the blind had all that was necessary for good work, cultural advancement, everyday needs, environmental sanitation and personal hygiene.

The Society runs a total of 252 such Centres. More than 60 per cent of them employ from 200 to 500 people and 10 per cent up to a thousand. In 1966 they turned out 337 million roubles' worth of products.

The Report adds :—

> "The prevailing types of products are now electrical appliances, radio components, lighting fittings, machines and instruments, and machine-made containers. The few rope and felt-boot shops that have survived are now fully mechanised."
>
> "The Society's factories make electric motors, step-down transformers, L.T. and H.T. switchgears, lighting equipment, a wide range of wiring accessories, spares for motor-cars, tractors, and farming machines, and so on."
>
> "Wide use is made of co-operation between the Society's factories and State-run industries. Over 180

factories are working in co-operation with the country's major works, either fully or partly."

The Society's factories co-operate with the State-run industries for tractor works, motor works, farm machine works, telephone equipment works, radio engineering works, etc.

Thus with the switching over from the traditional crafts to skilled jobs including fabrication of sophisticated component parts, the Society has made great strides in attaining self-sufficiency. The Report states that each of the Society's factories is self-paying.

After 1957, the Society was in a position to dispense with the State's subsidy. The Report adds that the size of the Society's income is such that it can afford to spend 20 million roubles a year on capital construction and put into service 180 to 200 cubic metres of production buildings as also 40 to 50 thousand square metres of residential floor area, many public recreation centres and children's establishments.

What impresses one is not only the switch over to highly skilled jobs, not only the successful organisation of Production Units, but the fact that in such a short time, the Units have attained self-sufficiency and the profits have enough margin for expansion and developmental work.

It would be worthwhile to study the organisational set-up of the production centres so successfully organised by the All-Russia Society for the Blind.

It is obvious to me that we all should take a fresh look at our existing workshops and try to modernise them and endeavour to convert them into full fledged Production Units.

Difficulties

I would not, for a moment, minimise the difficulties in organising Production Units which work on commercial and business lines and earn profits. I have gone through these difficulties and know only too well how formidable they are. All the same, it is my conviction that with determination and dedication, they could be overcome. Lack of success can only be attributed to human or organisational failures.

You may well ask where the finances are to come from. I am sure the State Governments would realise the advisability of harnessing the disabled human man power and endeavour to convert these masses into productive citizens. It would be a wise investment for the State to make the requisite funds available. I have no doubt that International Agencies will be only too willing to assist financially and technically.

Today, Workshops, working as Production Units, afford the best opportunities for absorbing large numbers of blind clients on remunerative wages. They help in enlightening industrialists to the capabilities of the blind and thus assist in accelerating open competitive employment.

I have not the least doubt that Production Units with Blind workers could be successful and profitable business enterprises. We must, therefore, make a beginning by taking a new look at our existing Workshops and re-organising them to suit modern needs and advances, making them profitable business undertakings.

Other Sheltered Occupations

Other occupations—particularly Industrial Home Work, Small Business Enterprises, Vending Stands and Sales Kiosks also offer excellent opportunities for remunerative work, though to a different category of the visually handicapped. In organising these activities on sound business lines, even greater business ingenuity and organisational skill is necessary. But such occupations give great personal satisfaction, and what is most important—a good income—to the clients served.

Home Bound Programmes

We are not considering here Home Work Programmes relating to personal or social adjustment or training of the blind. We are, in this paper, considering Industrial Home Work which would offer regular and remunerative work to those who,for physical, psychological or other reasons cannot leave their Homes and travel to and from a place of business or work. For giving remunerative work, only fully trained blind will have to be selected. Pastime occupations have no place in this programme. The programme aims at giving regular productive work at the residence of the blind client and ensuring the blind remunerative wages. In the modern world of economic competition, the sightless are already at an initial disadvantage. If Industrial Home Work programmes are to succeed, the organisers must ensure regular supply of work at the home of the client, as also pay him remunerative wages for his labour. It would be essential to carry the raw materials for fabrication to the Home of the client and also to collect and market the finished products. If the blind does not get work with clockwise regularity and if he does not get paid a living wage, his interest will wane and the programme will not succeed. Again here, the best method would be to select bulk contracts involving packaging, inspection, assembly and fabrication jobs which are remunerative. The success of these programmes would depend on excellent organisation of the transport arrangements.

Vending Stands, Sales Kiosks

I would strongly commend the study of the programme in Canada setting up Vending Stands where the blind sell a variety of articles. These Programmes greatly help in settling capable blind in independent business. In organising these programmes, initial help in setting up the Vending Stands or Sales Kiosks has to be given. If the blind with flair for salemanship are selected, there is no doubt that they could very successfully run Vending Stands or Small Sales Kiosks. In rural areas also, the blind can run petty shops, selling vegetables and other farm produce.

Small Business Enterprises

There is no doubt that small business enterprises provide ample opportunities—particularly to those who suffer from multiple handicaps, to earn a living wage. Given sufficient capital to make a modest start, salemanship, business acumen, willingness to learn and to work hard, a large number could be successfully helped to settle in small business enterprises. Innumerable such small business enterprises suggest themselves. They would have to be selected with great care, bearing in mind the assets and the limitations of the client, the favourable climate obtained in the community, the market and business trends, etc.

Research

If employment in Workshops or Production Units and other sheltered occupations is to be rapidly expanded to keep pace with the modern techno-industrial advances, continuous research would be necessary in (*a*) locating new avenues of employing the blind, and (*b*) executing orders competitively and on commercial lines. Almost every industry has hundreds of thousands of simple repetitive operations which the blind can productively perform without any risk or hazard. It is the responsibility of the Research Unit to locate such occupations. It would then not be difficult to convince the industrialists to allot sub contracts to Production Units and to help them in other ways.

We have, hitherto, not paid sufficient attention to research or allocated sufficient funds for it. I am convinced that the money spent on Research is an investment which would, in course of time, yield very rich dividends. We must also get a larger number of technical men from the industry—particularly Production Engineers—interested in our work. This will greatly help in giving a research bias to our work and assist our Production Units towards their ultimate objectives.

Recommendations

To sum up, my recommendations are :

(*a*) All avenues of securing congenial and remunerative employment should be simultaneously explored.

(*b*) We all should have a fresh look at all our existing

Workshops the world over, redefine our objectives, and modernise our Workshops to work as Production Units on normal, commercial and business lines.

(*c*) We should endeavour at standardisation of nomenclatures of institutions for the adult blind so that the objectives are self-evident.

(*d*) Fully trained and professionally qualified staff of the appropriate calibre only should be engaged and they should be paid salaries and given other benefits commensurate with those obtained in normal industry. More and more technically qualified persons—particularly Production Engineers—should be got interested in our work.

(*e*) Production Units should endeavour to switch over from traditional crafts to skilled jobs involving assembly, inspection and even sophisticated fabrication jobs.

(*f*) All Production Units should be fully equipped with modern plant and machinery.

(*g*) Production Units should follow modern management practices including proper costing, inspection, quality control, marketing and sales, etc.

(*h*) Simultaneously, endeavour should be made to keep the homebound blind gainfully occupied by providing industrial Home Work at their residence. Efforts should also be made to organise Vending Stands, Sales-Kiosks and Petty Shops. Every encouragement and assistance be given to the blind in setting up Small Business Enterprises.

(*i*) Continuous Research may be undertaken with a view to (*a*) locating new avenues of employing the blind and (*b*) gaining competitive status in industry by executing orders commercially.

(*j*) The blind clients should be ensured full living wages and other normal benefits including terminal benefits obtained in normal industry.

(*k*) The State Governments and International Agencies—particularly the United Nations and its Specialised Agencies—should assist in a big way—financially, by providing Plant and Machinery and by providing professionally qualified staff for commercially organising and running Production Units.

Despite tremendous efforts in the last few decades, the number of trained blind remaining unemployed is on the increase. This could be very frustrating. The basic objectives of their rehabilitation and training are defeated. If the huge amount spent on the education and rehabilitation of the blind does not lead to the ultimate objective of securing congenial and remunerative employment for them, then what has the

State and the Society achieved ? With increasing automation and ever rising living costs, the problem becomes more and more acute everyday. I would, therefore, in all humility and with all the earnestness at my command plead that all of us should re-dedicate ourselves to increasing employment opportunities for the visually handicapped so as to ensure them their rightful place in Society. Let us all ensure that before the next Assembly meets, there is at least a ten-fold increase in the number of blind gainfully employed and happily settled in life.

Thank you.

PROFESSIONAL SESSION 4 **Monday Morning, October 13, 1969**

SOCIAL SERVICES AS AN AID TO FULLER LIVING

Chairman : **Gen. Pil. R. O. Aramis Ammannato,** *Vice-President, Unione Italiana dei Ciechi, Italy.*

THE ROLE OF SOCIAL SERVICES

By **Mrs Elisa Molina de Stahl,** *President, Comite Nacional pro Ciegos y Sordomudos, Guatemala.*

I am very grateful for the honour and opportunity extended to me, to present at this important Fourth General Assembly of the World Council for the Welfare of the Blind, my thoughts and interpretation of THE ROLE OF SOCIAL SERVICES, based on my experiences during twenty years with the National Committee for the Welfare for the Blind, in my country, Guatemala, Central America.

The analysis and interpretation of the role of Social Services in programmes for sight conservation, prevention and treatment of eye diseases, education of blind children and total rehabilitative services for adult blind, is not only an interesting topic for social workers but it is also an opportunity for other staff members to revise and exchange views of procedures, methods and techniques used in the different countries, which vary-according to the particular needs of each nation.

The rapid changes in today's world have increased the challenge of the role that Social Service must accomplish. If we are to accept this challenge, we must not only conform the role to the traditional principles and techniques of social work methods, but by new concepts which we must put into practice, according to the particular needs of the people we serve and their environment.

The role of Social Services is influenced, to a large extent, by the purpose and functions of the agency in which it operates and the social and economic structure of the country.

For example, in an organization such as the National Committee for the Welfare of the Blind in Guatemala, it covers a wide field, as follows :

I. Medical Social Programmes

(*a*) Prevention of blindness and sight conservation.
(*b*) Medical and surgical treatment in out and in-patient departments.

II. Social Work in the School for the Blind

III. Social Service for Adult Blind

(*a*) In rehabilitation centres.
(*b*) In sheltered workshops
(*c*) In agricultural training centres.

IV. The Social Worker and the National Association for the Blind

Social workers of each of these services have important responsibilities of a varied nature : with the client, his family, the community and with the professional and technical staff in charge of those services.

I. Medical Social Programmes

(*a*) *Prevention of blindness and sight conservation*

The major function of the medical social services programme is teaching the community to understand the implications of eye diseases. In doing so, it is important to reach as many groups as possible. All efforts should be made to eliminate ignorance, prejudice and any other attitudes that could be obstacles in the comprehension and acceptance of specialized medical care.

Community prevention of blindness is also the responsibility of the medical social worker and must participate as well in legislative matters related to such aspects.

We have within our agency a sight conservation programme that covers public schools in the urban and rural areas. It is our firm belief that, without the interpretation to teachers and other people involved in the educational field, of the importance of medical consultation to prevent blindness or any eye disease, our effort would be in vain, especially in the rural area where this important role is mostly required. Therefore, I repeat, that any agency serving the blind should emphasize, through its Social Services, the importance of preventive services, and consider them as imperative.

(b) *Medical and Surgical Treatment in out and in-patient departments.*

The medical social case workers' primary concern in the clinics, is the individual patient, his attitudes toward his illness and any obstacle involved in the solution of his problems. They become a decisive factor in the overall medical programme, with activities that include prevention of blindness by educational process as well as social treatment.

With patients that may have fear of surgery or blindness and do not express it verbally, it is an important duty of the trained medical social worker to find out the signs to help them and explain their feeling to other medical staff members and to their relatives. It is the social worker's function to help the patient to accept the prescribed medical treatment, or to face whatever disability or physical limitation, either temporary or permanent, he may have as a result of his eye condition.

Of the population assisted in our clinics very few patients pay a small fee for the services they get. Most of the patients get free medical and surgical treatment as well as eye glasses when prescribed, after a social study made by the social workers. It is at this point where the understanding and ability of the social worker is needed.

The leadership of the medical social worker is important to motivate other members of the staff, to promote studies and research where further knowledge is needed. In securing a better adjustment for the adult blind and a more comprehensive attitude of the whole rehabilitation process, on the part of the patient and his family, we find it essential to co-ordinate our social services. The relationship between the social worker in the eye clinics and the social workers in rehabilitation centres or schools for the blind children, is necessary in order that constructive planning be secured from the beginning, according to the goals of the patient and his desires. Referrals in our organization are, therefore, made following these important steps, that when neglected in certain institutional structures often retard and even obstruct this important goal.

The wholehearted co-operation of the medical social service personnel with that of the other divisions of our institution is most important for the follow up of the cases involved and progress of our clients and their social treatment.

II. Social Work in the School for the Blind

Many children who come to our clinics for consultation are oriented to our school for blind children.

This is a coeducational and residential elementary school, which extends to the secondary level for boys and girls by placing them in public and private schools, recognizing the need of integrating them with sighted pupils after they have finished primary grades in our residential schools.

Here the major role of the school social worker is to assist children in adapting to school life ; counsels children and parents ; interprets school facilities, policies and expectations. Consults with parents, teachers, schoolmates, and other members of the school staff when there are problems such as negative behaviour or lack of school progress. Arranges for medical, psychological consultation or other sources that may help to disclose difficulties. Co-operates in organizing activities such as boy and girl scouts, recreation and other community activities.

Helps needy families to overcome their problems to secure a better home life and a better environment for the children attending the school.

Meets with boys and girls in the integrated high schools programme, and aids them in every possible way to solve their problems, like adjustment to the new environment ; lack of facilities for their studies such as books, readers, monetary grants and tuition fees in needy cases. Recommends change of schools tutoring, etc. Keeps in contact with teachers and parents, in order to obtain their co-operation in cases where it is required.

At the beginning of the school vacation period, under the social worker leadership, arranges a circle of lectures for parents on the premises of the residential school for the blind, to instruct them in how to bring up their children, to avoid such matters as over protection or neglect. This complements the work and philosophy of the school's educational programme.

Social workers should visit homes in the rural areas to enforce school attendance, by persuading parents to send their children to school and to ascertain background and needs of the family. This holds true also for children in urban zones. Co-operate with the vocational guidance staff, referring cases for study and give all information which will be helpful for evaluation.

III. Social Service for Adult Blind

(a) *In rehabilitation centres*

Adult blind are able today to become self sustaining and contributiing members of society through rehabilitation services. This process calls for a multidisciplinary action. It is of such vital importance to achieve success in this type of work, that all members of the professional staff should work together for a common goal : the client's needs and the way he can be assisted to overcome them.

In the National Committee for the Welfare of the Blind, all clients are referred by the medical social cases worker after she has appraised the client's readiness for rehabilitation services. Before he is oriented to these services the client has the opportunity to discuss matters of rehabilitation with the social case worker at our clinics. This contribution is very valuable as the first step, to the client and his family for accepting rehabilitation services.

At the intake in the rehabilitation centre, an experienced and skilful professional social case worker should complete the job of interpreting to the client and his family in a realistic way, what to expect from the agency's programme. The client has to be helped to make decisions, as some times he is frustrated, that he needs encouragement to regain confidence. This is a difficult task, and many times it cannot be accomplished so easily ; it often requires assistance on the part of the client's family, as it is also affected by the client's decisions.

More than any other professional member of the staff, the social worker should always be on the alert in order to see that the client's individual needs should not be overlooked, having in mind that he is a person of dignity, and that in decisions that affect him, he should participate.

The Social Service co-operation is not only important in the social treatment of each particular person or group, but also as an agent who can motivate other members of the professional staff, in the true sense and spirit that their important work demands. It is not only required to have a common goal, but learning to work together is also essential' something which is frequently difficult with a group of experts who sometimes are of high professional standards, but very independent. They must be constantly motivated to accept teamwork, to be successful. We feel this type of interpretation is an important function, where social work can be very helpful in aiding other members of the staff, to have the understanding of the important task that is required of their knowledge and participation in the whole process of evaluation, adjustment and training of the blind.

Counselling with the client and his family is a major role of the case worker in the whole process of rehabilitation. Through special skills the professional worker co-operates with the person in order that he should also take a role in his rehabilitation. The incentive of employment to solve their financial problems is an important tool for the client's receptiveness. In occupational and vocational training, the social worker takes part in counselling and placement. Other members of the staff help also in this particular field.

(b) *In Sheltered Workshops*

Occupational areas are limited in our country, even for sighted people, as it is not an industrial country, however, promotion on the part of our staff is opening doors to blind individuals in competitive jobs. To overcome this shortcoming, the Committee also has a sheltered workshop for industries whose products have a good commercial demand, and a lottery with a group of lottery selling agents, which is a common occupation for blind individuals with commercial vocation but with low academic and cultural background. That is the reason why the role of Social Services, as an aid to fuller living should promote an ample field for the welfare of the blind.

(c) *In Agricultural Training Centres*

Facing the fact that 72 per cent of Guatemala's population is of rural extraction and that consequently, most of the country's blind originate from a rural, agricultural background, the Committee has established an agricultural training centre.

The role of Social Service is to find blind adults from the rural areas, to bring them to our training centre and after their rehabilitation in farm practices, integrate them to their community, where they start earning their living in the activities they were trained. In all cases the Committee gives technical assistance and, in a good number of them, financial help until they become economically self sustaining.

To meet the demands for group work in our organization, as a means of social and emotional adjustment, such as is needed in the rehabilitation process, we have a competent specialized social group worker. In our organization group therapy is given in our psychological clinic, in which the social workers participate. Recreational and group counselling is the special role of our Social Service worker, aiming always to promote personal growth of the individual's adjustment to other persons and to other groups.

IV. The Social Worker and the National Association for the Blind

In Guatemala the National Association for the Blind, is an autonomous institution which enrolls 99 per cent of Guatemala's blind. Its associates have founded two co-operatives as savings, loans and consumer corporations. The group social worker of the Committee assists its members in their recreation, education and club activities. Technical assistance is given by the Committee's Social Services to the group in their social goals, but always keeping in mind that the role of our Social Services with the groups should be of an indirect leadership leaving decisions under their own responsibility.

As explained, the social workers have an important role in the activities of the National Committee for the Blind, however it is our conviction that Social Services should evolutionize according to constant social changes and the needs of the modern world.

THE ROLE OF COMMUNITY ORGANISATIONS

By **Mr E.W. Christiansen,** *Director, New Zealand Foundation for the Blind, New Zealand*

For the purposes of this talk, I would like to define "Community Organisations" as being of two types. Firstly, "Charitable Organisations" such as those represented by you ladies and gentlemen here today. Generally, such bodies would have the following characteristics. They would be officially recognised by the government of the country and generally would possess a charter of endowment, deeds of association, or a constitution which would specifically lay down the type of work they are to perform. They would perhaps be supported by annual donations from their government or by gifts from state funds for specific purposes. The other source of their income would be through gifts of money and property. These generally take the form of legacies or of funds raised by public subscription. Such charitable organisations would probably have a governing body comprising representatives of government, business, education, and medicine. This body would employ professional servants such as yourselves and your colleagues who work for salaries and wages. It would own property and have facilities for carrying out its work. I feel you would all agree that this general description fits your own organisations.

The second type of community organisation which interests us usually takes the form of a club whose members devote a large proportion, if not all, of their efforts to what are commonly called "Good Works." These clubs would generaly have a national organisation with branches whose membership comes from the local community. Examples of such organisations are Junior Chamber of Commerce, Rotary, Lions, Freemasons, etc. These organisations would always contain among their members very successful and capable men in many fields of activity—medicine, law, business, etc. We would consequently expect them to achieve a high degree of efficiency in their club activities, even though on a part-time basis. Because of this, when dealing with them we should treat them with the respect and same business-like approach we would adopt if we were negotiating with a government department or business organisation. Again, I am sure you would all be familiar with the club type of community organisations.

Let us ask ourselves, "What is the role or place in society of charitable organisations such as our own ?" In our case, we are concerned with giving help to those individuals who are unfortunately afflicted by blindness. This work involves first of all finding these blind persons and then we have to convince both them and the community at large that our type of organisation can offer very real benefits and help which the blind can obtain nowhere else. It is apparent that in order that we may perform this type of work, the public must have a very favourable impression of us. To create this type of image we must spread favourable propaganda about ourselves and our activities. First of all we must achieve professional expertise in our actual work on behalf of the blind. The public must then be made aware that a blind person who comes to us derives a very real measure of comfort and stands a good chance of learning new skills which will enable him not only to earn his own living, but also to achieve a measure of independence, self-respect, confidence, and happiness which he can obtain nowhere else. And how can we achieve such a desirable reputation ? This is a very difficult question to answer. But I am sure you will all agree that its first requisite is the efficient performance of our duty towards the blind. To a certain extent, word of our good work will spread. We can speed this process of educating the public by formal advertising where necessary and by achieving a good relationship with press, radio, and television which will enable our organisations and their activities to be frequently featured as news items, creating an informal and free advertising campaign. Formal advertising costs us money which we can ill afford, if we can afford it at all. But the building of a favourable image spread by word of mouth and the public relations type of news handout costs us no money at all, but can only be based upon an impeccable reputation and integrity.

I would like to think that the New Zealand Foundation for the Blind has such a reputation and that its ntegrity is well known and respected in my country. This would not be so, in spite of the efficiency and feeling with which I sincerely hope the New Zealand Foundation for the Blind carries out its work, if there were any stains upon its character. To be more specific, we should be poorly viewed by the New Zealand public if our officials rode in Rolls Royce cars and led immodest lives—if the Foundation and its employees were known to be lavish entertainers and the earners of fat salaries. I would stress that only by being of good repute can we do our work and, equally important, can we raise the money which enables us to do our work. Besides giving help, we badly need help, and the help that we need from the general public is chiefly money. It is difficult enough to persuade the public to help us in our genuine work, and we make this all the more difficult if our reputation is at all impaired. This naturally leads us to the conclusion that a great deal of our energies must be exercised in convincing the public that we are a worthwhile object for charitable support. Having convinced them we must take positive steps to ensure that they do, in fact, give us money.

Fund raising in the modern society is an immensely complicated undertaking and one requiring a knowledge of the business world which would hardly be found in an organisation such as the New Zealand Foundation for the Blind. The type of man who has developed the organisational skill and techniques required for fund raising is generally working in some commercial undertaking. In fact, he is just the type of man who will be a member of the JC's, Lion, Rotary, and the Freemasons This obviously leads us to consider that there is a very real and necessary connection between community organisations of our type and the voluntary service club which performs good works. We need these clubs, their skills, their manpower, and the money which only the mobilisation of these resources can bring us. We are helpers—helpers of the blind—but sorely in need of help ourselves.

In New Zealand, our chief fund-raising activitiy is known as Braille Week which culminates in a nation wide house-to-house collection. In a country of only some two and a half million people, this requires the mounting of a full-scale professional advertising and public relations campaign. Such a concentrated propaganda effort has to be paid for and it must be carried out with the efficiency and ruthlessness of a business company launching a new product. We have to tell every New Zealander our message if we are to hope that he will contribute even a few cents to our Braille Week appeal. Our advertising campaign must pay for itself and be totally effective before it can contribute even one cent to be used for the welfare of the blind.

Here we come to the relationship between our own Foundation and the voluntary service clubs which help us in New Zealand. Our house-to-house collection is carried out by 33,000 voluntary collectors—in modern terms, an army corps composed largely of the members of voluntary service clubs and entirely organised and controlled by one of these clubs. The New Zealand Foundation for the Blind does not have an army corps on its payroll. It does not have the manpower or the finance with which to raise the very finance it so sorely needs. I have said that New Zealand is a country of only some two and a half million people and the resources and manpower which the voluntary service clubs place at our disposal is enormous, even for such a small country. You ladies and gentlemen are almost all respresentatives of organisations similar to my own in countries far larger than New Zealand. Our reliance on such organisations is immense. They have so much to offer us. How much more so is this the case with you in your much larger lands ! How precious to you, and to the blind of your country, is your integrity and reputation ! Guard them well, for many other charitable organisations compete for the help which voluntary service clubs can give you. You must be deserving of this help.

You may well ask "How do we go about getting the support of such voluntary service clubs once we are known as a deserving cause ?" First of all we should find out just which voluntary clubs are able to undertake the type of activity which we need. This information can be obtained by looking around at the activities of these clubs ; by examining their charters or constitutions to see whether such activity comes within their scope. We must find out which clubs possess the pure manpower to form our "army corps" and which possess the right talent and organisational genius any large-scale fund-raising campaign necessarily requires. Having by such methods selected the most useful bodies for our purpose—bodies which we would feel well disposed towards us—we must find out who their presidents, secretaries, and other influential officials are. We must develop a close personal equation with these leaders and we must persuade them that we are the organisation most deserving of their support.

I believe it was Carlisle who said "Man does less than he ought unless he does all that he can." We must spare no effort to keep faith with the public, voluntary service clubs, and with the blind who are so dependent on us. We can be sure that news of our sincerity of purpose will spread. We can be certain that rumours of poor performance on our part will spread even more readily. We must jealously guard our good name if we are to be given an opportunity to play our role in the community, and to play it well. If we do this and do it conscientiously, we will be assured that all other community organisations will play their part in full and make the community in which we live a better place.

THE ROLE OF THE PSYCHOLOGIST

By **Mr Carl J. Davis,** *Head , Department of Psychology and Guidance, Perkins School for the Blind, U.S.A.*

When one speaks of psychology one is referring to a multiplicity of functions and activities all of which serve to aid the blind person in the attainment of an independent useful life in a community established by, and designed for, those who see. Within the general field of psychology there are many subdivisions of specialization from most of which there are individuals who are directing their efforts toward the expansion of knowledge about, and service to, the blind in society. Much of what they have, and are accomplishing can be extended across national and cultural boundaries. The knowledge and service that cannot be directly transmitted to other countries and regions establish models which can be replicated by psychologists in a locale that is different from the source. The intent of this presentation is to illustrate to you the diversity of activities in which psychologists are involved that have, are, or will influence the education, rehabilitation and socialization of the blind.

Before this century opened there were people like Heller in Leipzig who were investigating the methods by which the blind person perceived and the manner in which he organized his perceptions. He has been followed by many others who concerned themselves about the same and similar problems. People like Steinberg in the twenties, Von Senden and the Lowenfelds in the thirties and forties, Axelrod in the fifties to name a few. The results of such investigations have enhanced the ability of educators to teach blind children and rehabilitation personnel to teach the blinded.

In another area of perception the investigations by Cotzin, Dallenbach and Worchel in the area of obstacle perception have had a significant effect upon mobility training. Leonard and Juurmaa have extended the studies in this area. Lord and Blaha using their knowledge and other data from developmental psychologists have developed scales for use in teaching orientation and mobility to children.

As early as 1913 Kohs was asked to adapt the Binet-Simon Scales for the purpose of comparing the intellectual ability of the blind with that of the seeing. Although this effort did not bear direct fruit, in the mid-teens Drummond adapted Binet's scales and by the twenties Hayes had a usable test of intelligence for the blind. Hayes' work in the area continued until the fifties. Since then Williams, Newland and Davis have developed tests of learning ability standardized upon blind children. In 1940 Bauman was asked to consider the evaluation of blind adults for rehabilitation training. She since then has developed a successful battery of diagnostic procedures. More recently Juurmaa has attacked the same problem and Gruber, Jones and the Shurragers have added diagnostic tools for use with blind adults. Ohwaki and Rich and Anderson have worked upon the problem of non-verbal examination of children and Ohwaki's test has been available in recent years. On the other hand Elonen has stressed the value of observational techniques in the diagnosis of children's behaviour.

The measurement of personality is more strongly culturally influenced and fewer psychologists have approached this area. Palaccios, Braverman and Chevigny, and Bauman are some of those who have approached this task with instruments constructed specifically for the blind. Many other psychologists use instruments that were constructed specifically for the seeing but which may be presented orally to the blind. Due to the fact that in this area analysis of human behaviour is appraised in terms of quality of response rather than by obtaining information that can be quantified, the psychologist has considerable latitude in adapting examination procedures that have been devised for use with the seeing.

In the past two decades Norris, Sommers, Cohen, Burlingham, Sandler and Fraiberg are only a few of those who have vastly increased our knowledge of how and why blind children develop differently than the seeing child. While the accumulated knowledge of these processes is not yet sufficient, the contributions have had a vast influence on pre-school counselling of parents and the training of their children. The effects of such knowledge is influencing educational programmes, particularly in the area of recreational and social programming. Combined with the product of the results of Cowen and his associates and those of other investigators the desirability of including psychologists and, or, guidance counsellors in educational programmes has been clearly demonstrated.

Working with adolescents and adults Cholden described the psychological processes that occur following the loss of vision. His findings have had a profound influence upon the initial rehabilitation procedures with the blinded individuals in his own country and elsewhere. Failure to pay heed to his discoveries can markedly delay and inhibit the rehabilitation process. In addition, he clearly indicated the benefits to be obtained via placing the newly blinded and the older non-functioning blind in group psychotherapeutic settings. Such procedures have speeded relearning for some, and they have made it possible for others to recover their ability to function and become productive in the community.

Until now I have been describing the variety of activities of psychologists concerned directly with the human system. During the past decade technology has been "catching up" with the blind person. In many countries research and development are in progress for the purpose of producing sensory aids. When the new hardware is applied to the blind person a man-machine system is created and it is the task of both engineer and psychologist to evaluate the efficacy of this system. The importance of the psychologist in this area is clearly demonsstrated by the fact that from among the twenty-four members of the advisory and steering committes of the Sensory Aids Centre at Massachusetts Institute of Technology fifteen are psychologists and another two are not engineers. Their presence is necessary to guarantee that the machine system serves, rather than dominates, the human system.

In other areas of technological development we find the psychologist and engineer working together : Foulke in his efforts to make rate-controlled-speech comprehensible and available to the blind and Nolan constantly engaged in the comparative assessment of communication media for both educational and general usage. Psychologists like Gibson and Liddle who investigate the reactions of the blind to different kinds of stimuli are working toward the establishment of parametres of non-visual perception to aid the engineer who is designing sensory aids in the laboratory.

Social psychologists like Scott study the rehabilitative and social milieu that influences the blind and the blinded in order that we may continually revise and upgrade the processes that produce the blind adult. On the other hand Van Weelden through his study of and about the blind makes it possible for those of us who see to understand more fully what it is like to be blind. In contrast is the work of Siller and others that describes the attitudes and reactions of the seeing to the visually handicapped ; thereby, providing a frame of reference from whence we can develop programmes to educate the community so that it will be more receptive to those who cannot see.

Summary : An attempt has been made to indicate to a limited extent the variety of service that psychology offers to the education, rehabilitation and socialization of the blind. All too often the worker with the blind is unaware of the information that is available from the laboratory, and all too frequently the worker is not aware of the assistance that can be made available from local psychological services. Sometimes it is necessary to overcome reluctance and reservations that stem primarily from lack of knowledge on the part of the psychologist of the assistance that can be provided to the visually handicapped. The initiative must rest with the worker for he exercises that initiative. The psychologists want to work with you.

THE ROLE OF THE LEGISLATOR

By **Mr Eero Hakkinen,** *President, Central Association of the Blind, Finland.*

I have been assigned to outline the role of the legislator as a subject to be discussed. To begin with, I should like to point out that it is very difficult to present the subject competently and in a world-wide scale, because development in different parts of the world has, no doubt, varied a lot. Different polictical and social systems have doubtlessly made the position and functions of the legislative bodies very different in different countries. Besides, due to historical development many social functions which have been performed through legislation have in other countries been taken care of just as efficiently or even more efficiently by voluntary civic organizations. The latter is, however, possible only in rich countries. It does not seem that it is of special importance to secure the social work for the welfare of the blind, and other disabled groups as well, through legislation in countries where it is not possible to raise sufficient funds through voluntary civic organizations. Consequently, I shall discuss the problem with the reservation that my knowledge of these questions in a world-wide scale is very limited and that it is very difficult, even impossible, to give a complete picture due to the fact that the development in various countries has taken different ways.

In industrialized western countries, and especially in the Scandinavian countries, the conditions of which I know best, the development has approximately proceeded in the following way.

The first help to the blind was initiated by the church and private philanthropy. During many centuries the church was the only official body who took care of the blind in the form of both financial support and special welfare institutions. It is worth mentioning that even today it is the church that helps the blind in a remarkable way for instance through the maintenance of schools for the blind.

The period of helping oneself can be considered the second phase of the development. The blind established organizations through and by which they were able to improve their conditions remarkably. This kind of activity is generally, in any case in Scandinavia, very new, born mainly at the turn of the century. The organizations working on the help-yourself basis, were actually possible only after the education of the blind was established. The standard of scholastic knowledge and general enlightenment that only schools can give is mainly a condition of efficient organized activity.

Social welfare work prescribed by law comes only third. It was not born until after the first world war and in many cases only after the second world war. The own organizations of the blind have played an important part in establishing this kind of legislation. In addition to the support and welfare work prescribed by law the work done by the blind's own organizations is still necessary.

It is interesting to follow the development of legislation. Due to the fact that legislative social work is a considerable expenditure to the state it is only natural that in the beginning only such laws were passed that did not cause heavy expenses. For this reason the small groups of disabled who have the most difficult conditions are taken into account first. This has been the way in Scandinavia anyhow. The first law concerning the disabled in Finland was passed in 1934. It granted the blind a so-called blind aid, which the blind themselves like to call blindness recompense. Only several years later the general social security law was passed (old age and disability pensions). Real, many-sided social legislation has only come about after the second world war. During this time the national health insurance, work pension laws, family pensions, private enterprise pension and housing laws have come into effect, just to mention a few. It can be inferred that social legislation goes from private cases (minority groups) towards general social work and from the most difficult social problems towards laws which concern also less severe cases. This is the way it has been in Finland anyhow.

In this connection it is interesting to discuss whether special laws are needed for the blind or whether general social laws suffice for them, too, provided that legislation on the whole has reached a mature stage. In order to throw some light on this question and some others as well concerning the legislation for the blind I sent a questionnaire to all member countries of the World Council. I received 28 answers, in other words quite accurately 50 per cent reacted to the questionnaire. I must confess that due to hurry the translation from Finnish into English was somewhat inaccurate. It was my intention to find out what are the things that have been arranged through legilsation. But now it may be that the answers include things that have been arranged some other way than legislation in the respective countries. In any case I think that I got a very good general idea of the legislation for the blind in the member countries of our organization. I should like to take the opportunity to express to all of you who took the time to answer the questions my sincerest thanks. It has been of invaluable help to me. The meaning of the questionnaire was to get answers to the following three questions :

1. To what extent, in general, have the affairs of the blind been taken care of by legislation ?
2. What are the things that have been considered most important to prescribe by law ?
3. Are special laws concerning the blind generally considered necessary ?

The answer to the first question is that in all countries from which the answers came, at least some of the things have been arranged by legislation. However, great differences exist in this respect. In some countries only a few of the most important problems have been solved through legislation, whereas in some other countries, judging by the answers, almost everything has been taken into account in their legislation. Naturally the picture can by no means be complete, since 23 of the 28 answers came from industrialised countries and only 5 from developing countries. We can presume that it is in the industrialised countries, which generally are richer, that legislation has developed to the highest degree. According to the answers there are special laws for the blind in 14 countries and in 19 countries the blind are mentioned in general social laws as a specific group.

The second question was about the things that have been considered most important to prescribe by laws. It is natural that the education of the blind takes the first place among the special laws due to its fundamental character. Of the 28 countries answering the questions in 20 countries the elementary schooling of the blind has been arranged by a special law and vocational training in 14 countries. Presumably in the rest of the countries the education of the blind has been included in general school laws. Pension or some similar social privilege has been settled by law in 16 countries, placement in 11 countries. There are legislative travelling advantages in 14 countries and free radio licenses in 17 countries. In 10 countries the law secures the blind technical aids, advantages in housing and/or lower rents in 7 countries. A law for the prevention of blindness is in effect in 7 countries.

The above information does not naturally mean that the corresponding advantages would lack in other countries, but they have not been arranged by law. Many functions are performed, as I have strongly stressed, not only by state but also by private charity organizations as well as the own organizations of the blind.

The third question "Are the laws concerning the blind generally considered necessary ?" was answered by 23 countries. 18 countries were of the opinion that special laws are needed, whereas 5 countries found that no special laws were necessary but that it is enough to have the blind observed in ocmmon laws. The answers to this question were not divided according to some prejudgments, not for instance according to rich and poor or industrial or developing countries. The countries that gave positive answers include England, USA, the Soviet Union, Denmark, Ceylon and Syria. Negative answers were given by Sweden, Japan, New Zealand, Czechoslovakia and Nigeria.

The necessity of special laws concerning the blind was based on the following arguments :

> "As blindness causes many quite special problems, which will be difficult to solve through the general legislation."
>
> "To provide services, supplies, and equipment which are not provided for through other legislation."
>
> "Because of their special need."

As a main argument against special laws the following was usually given :

> "Because to avoid the blind to segregate from the general society and not regard them as the special ones."

The question whether special laws are necessary or not is very interesting from the legislator's point of view. As was seen, most countries consider the special laws necessary in order to secure the advantages needed for the welfare of the blind. It is hardly possible to solve the problem quite objectively. It is mostly a question of the social philosophy prevailing in the respective countries. For instance the Finnish Central Association of the Blind considers the special laws necessary but my experience as a member of a legislative body points to the fact that at least in Finland it is nowadays difficult, even impossible, to pass special laws which would only concern the blind.

My own experience as a member of the legislative body is quite limited, since I have been a member of the Finnish Parliament only three and a half years. The most important achievement as a member of the Parliament I have found to be the mutual information. Especially the information that I have been able to give to the social committee of the Parliament and to the opinion leaders of the Parliament in general has been of great importance. I have, on the other hand, been able to inform my own association, the Finnish Central Association of the Blind, what kind of legislation is under way in the Parliament.

On the other hand, I have had the chance to realize how little, in fact, a single member of the Parliament can influence the actual legislation. There are 200 members in the Finnish Parliament, and in that number the influence of one member, especially a new one, cannot be very great. Especially the fact that the idea of passing special laws for some group of disabled persons has been given up in Finland diminishes the possibility to influence of a representative of one group of the disabled. The attitudes of the representatives of the big groups are even for reasons of election techniques much more pregnant than those of the representatives of a small group.

But even though a single member of the parliament cannot decisively influence the legislation he can through his public relations work get advantages to the group that he represents. Thus I have been able to get remarkable financial advantages to the Finnish Central Association of the Blind, partly for entirely new projects, partly this can happen by influencing the allowances in the State budget, about which the Ministers can decide.

As it is my assignment here to clarify the role of the legislator, the question must be understood so that it is not so much what a single member of the Parliament can do and does, but what the whole Parliament does. For that reason I take the liberty to present some general conceptions of what in my opinion the legislative body ought to do for the blind. It may be necessary even for the reason that apparently there are still a great number of countries where there are no special laws concerning the blind at all, nor any general social legislation. Historically the legislator comes into the picture at quite late a stage and assumes social functions which formerly were performed by the church and philanthropic organizations. Even the social legislation of the developed countries is not more than 20-30 years old.

The legislator has to take care that the citizens who are in the most difficult conditions are taken into account first. The blind definitely form such a social group. In my opinion the most important duty of the legislator is to see that the blind citizens get as wide a general education as possible and, in addition, vocational training as well. It is only a sufficiently high standard of knowledge that gives a blind person a chance to fight his way through to a position in society. This is true of any society. The standard of knowledge of a blind person must be at least as high as that of the citizens of the country in general, preferably even higher. The importance of education has generally been realized. It has been proved by the fact that long before the social security system was created for the blind, schools for the blind were established.

The second duty of the legislator is to create a sufficient social security for the blind. In case the resources of a given country cannot afford a general social security it must, however, be given to the most difficult cases of the disabled, that is for instance to the blind. It does not matter whether the social help is called pension for the disabled, for the blind, support for the blind or anything else. The main thing is that society strives to secure the position of the blind in a sufficiently efficient way.

By the side of the duties mentioned above the prevention of blindness ought to be considered of equal importance. The legislator must initiate such legislation concerning the medical care and health service that blindness can be diminished to the minimum. In many countries there is still a lot to be done in this respect. We are just beginning to handle this problem in the proper way.

Besides, after these main duties there are things to take care of which are important in themselves but can be considered to be of secondary importance, such as technical aids, travelling and taxation privileges, free radio licenses, free postage and so on for the blind. Above all, legislation must secure the raising of funds for the important ends of the social welfare work for the blind. It is not necessary that this be done by various State bodies and organizations. Different welfare institutions and the own associations of the blind can just as well act as executive bodies. I should like to say that legislation should not tend to make the organizations of the blind unnecessary. As councils of specialists they can in every case give valuable help in the performing of social functions. The legislator must create the necessary conditions and facilities for efficient social welfare work, but not strive to push aside the social welfare institutions, let alone the own organizations of the blind.

PROFESSIONAL SESSION 5 **Monday afternoon, October 13, 1969**

SCIENCE IN THE SERVICE OF SIGHT

Chairman : **Mr John F. Wilson,** *Director, Royal Commonwealth Society for the Blind, England.*

REPORT OF THE COMMITTEE ON PREVENTION OF BLINDNESS

By **Mr John F. Wilson,** *Chairman*

The Prevention of Blindness Committee has not met collectively since the New York conference, but our representatives have participated in six joint meetings with the International Association for the Prevention of Blindness and the World Health Organisation. The object of these meetings was to co-relate the interests and policies of the three participating organisations, to stimulate national action and to formulate international policies. Two important developments have resulted.

By far the most significant was the adoption by the World Health Assembly, in Boston on July 23, 1969, of a resolution which for the first time involves WHO positively and comprehensively in the whole subject of preventing and curing blindness. The resolution starts by recognising that most of the world's blindness is preventable or curable. It notes the valuable specialised work done by WHO and various governments and the increased activity in this field of non-governmental agencies and their belief that there now is need for more systematic information, clearer identification of objectives, and improved machinery for co-ordination. It requests the Director-General of WHO to undertake a study of the information now available on the extent and causes of blindness and to propose activities in this field which WHO can carry out within its programme. In doing this, the Director-General is requested to collaborate with other international organisations with interests in this field, including non-governmental organistions having consultative relations with WHO.

This resolution, formulated on our initiative, was introduced by the Government of Malawi, suppported positively by twelve countries, and approved unanimously. Our Committee would like to thank the many national delegations of WCWB for the most effective action which they took to enlist official support for this resolution ; it is a good example of WCWB in collective action at the international level.

The second development has been the establishment of a Standing Joint Committee of WCWB, with the International Association for the Prevention of Blindness and the World Health Organisation. This Joint Committee, which was approved by the Belgrade Executive, was formally established last year with the name of the "World Prevention of Blindness Committee." Its function is to act as a permanent link between the three international organisations and to take action on agreed policies. It was this Joint Committee which took the initiative in formulating the World Health Organisation resolution to which I have already referred. The Committee consists of three representatives of WCWB, three of IAPB and one from WHO. The Chairman is appointed at successive meetings by WCWB and IAPB.

Another development is the increased number of countries which have formed national prevention of blindness organisations. Such organisations now exist in thirty countries, six more than at the time of the Belgrade Executive meeting in 1967.

At the same time there has been impressive development in the prevention of blindness programmes of various countries and regions. The most notable extension has been in rural treatment in Asia and the massive campaigns now mounted against trachoma in Africa. The increasing recognition of vitamin and protein deficiencies as a cause of child blindness in the developing countries has also been significant.

With the agreement of the Executive, I put forward the following proposals:—

1. That WCWB should seek associate status with the World Health Organisation. Now that WHO is entering decisively into this field, it is important that we should have consultative status in addition to the excellent informal relationships which already exist. Such status confers substantial privileges including that of speaking at a WHO Assembly, at which matters of primary importantce to the blind are being discussed. The procedure for obtaining such status is formal and protracted but I believe that our appilcation will be welcomed.

2. That we should continue and strengthen the machinery for contact and liaison with the International Association for the Prevention of Blindness and the World Health Organisation. This can be done both through our membership of the Joint Committee (to which I have already referred) and by our representation on the Executive of the reconstituted International Association for the Prevention of Blindness. The Joint Committee should be regarded as our normal

channel of co-operation and as our consultant in this important field of work. To some extent it will take over some of the functions of our Prevention of Blindness Committee and I suggest that the number of members of this Committee should in future be reduced so that it will consist principally of our representatives on the Joint Committee and on the Executive of IAPB.

MASS TREATMENT OF BLINDING DISEASES IN RURAL AREAS

By
Dr. T. H. Kirmani, D.O. (London), F.R.C.S. (Ed.),
Associate Professor of Ophthalmology, Jinnah Postgraduate Medical Centre, Karachi, Pakistan.

Mr. Chairman, Ladies and Gentleman,

According to the World Health Organisation Demographic Survey in the Eastern Mediterranean Region, 1962, the prevalence of blindness in the developing countries of Asia and Africa is about five times that of the average in the Western Europe and United States. The estimate in Pakistan is 1024 per hundred thousand of population.

Definition of Blindness

The definition of blindness in various countries for pension purposes, is "a central visual acuity of 6/60 or worse with the best correcting lens, or a field defect in which the field has contracted to such an extent that the widest diameter of visual field subtends an angular distance no greater that 20 degrees." This definition is taken as standard in Aden, Cyprus, Pakistan, Saudi Arabia, Kuwait and Tunisia.

Four countries, Iraq, Somalia, Syrian Arab Republic and Yemen, have defined blindness as "complete and irreparable loss of the sight, *i.e.* blindness in the absolute sense."

Jordan defines blindness as "inability to count fingers at five metres distance with the best correction or visual field contracted to less than 20 degrees."

In the United Arab Republic, any person whose visual acuity is less than 1/60 is considered a blind person.

In French Somaliland, Iran and Tunisia any person with a visual acuity of 3/60 or less is termed as "blind."

Number of Blind Persons

United Arab Republic, Cyprus and Kuwait collect information on the blind from population censuses. However, this method is not satisfactory as a number of afflicted persons do not inform the census enumerators of their handicaps. Special surveys on blindness help a great deal in securing more accurate information, provided that they are carried out with proper care. Epidemiological surveys have been carried out in Iran, Syrian Arab Republic and Tunisia.

In some countries the only information available is data on patients reported by the health centres. On account of the selected population this source of information is generally not useful for obtaining a reliable estimate of the volume of blindness in the total population.

In Table 1 is given a summary of the information on the number of blind persons in various countries together with information on total population in 1960. The table also shows the calculated percentage of the total population suffering from blindness, and also the percentage of visitors to out-patient clinics.

Figures in this Table should, in the light of the preceding remarks, be treated with great caution since they can give only a rough picture of the prevalence of blindness. With these reservations, it is seen that the prevalence of blindness varies greatly from one country to another. Blindness seems to be most widespread in the Arabian Peninsula where as many as 3 to 4 per cent of the population may be suffering from blindness. In many countries a blindness rate based on the available information is between one half and one percent of the total population. The lowest rates are reported from the Syrian Arab Republic, Cyprus, Kuwait and Somalia.

This information will help us to arrive at a minimum number of the blind—1½ to 2 million approximately—in the countries of the Eastern Mediterranean Region which had a total popula- of 210 million in 1960.

The incidence of blindness in different age groups was distributed as follows ;

Age Groups	*Percentage*
—1	4.4%
1—4	28.3%
5—9	11.5%
10	55.8%
Total	100.0%

Of the 226 blind persons 190 or 84% were males and 36 or 16% were females.

Somalia, Southern Region

Based on observations of the Ambulatorio Ospedaliero (First Aid Hospital), the following estimates of number of blind persons per 1,000 population in various age groups, are reported :—

Age group	*Number of blind persons per 1,000 population*	
	Male	*Female*
— 5	4	4
5—14	3	3
15—29	22	1
30—44	2	1
45—59	3	2
60—	4	2

TABLE I

STATISTICS ON BLIND PERSONS IN VARIOUS AFRO-ASIAN COUNTRIES

Country	Population 1960 (in thousand)	Number of blind persons	Percent of total Population	Percent of patients	Source of Information
Republic of Southern Yemen	1013	53 out of 126 patients		42	In the Wadi Duan
Cyprus	563	1,342	0.24		Census 1946
Ethiopia	20,000	75,000-90,000	0.38	7.6	Rough estimate
		446 out of 5,896 visitors	— 0.45		Haile Selassie Eye Hospital Addis Ababa
French Somali-Land	67				
Iran	20,182	280,000 of which 150,000 blind both eyes	0.75		Estimate based on epidemiological studies in the Caspian Sea Coast and Central areas 1954-60
Iraq	7,085		0.5-1.0		Estimate 1961
Jordan	1,690				
Kuwait	223	509	0.23		Census 1957
Pakistan	92,727	660 out of 12,043 patients		5.4	Khyber Medical College, West Pakistan, 1961.
		2,103 out of 29,500		7.1	Dacca Medical College, East Pakistan—1961.
Saudi Arabia	6.036	180,000	3.0		Rough estimate (by rural health and Community development project)
Somalia	1,990		about 0.3		Estimate based on observations at Ambulatorio Ospedaliero 1959
Syrian Arab Republic	4,555	4,154	0.1		Survey of the Ministry of Social Affairs and Labour 1958-60
Tunisia	4,168	18,000	0.45		Survey in collaboration with the National Union of the Blind Persons 1960
U.A.R.	25,365	75,000	0.3		Census 1960
	25,929	120,000	0.5		
Yemen	5,000	180,000	4.0		Rough estimate

Syrian Arab Republic

The age distribution of blind persons in Syria, according to a survey carried out in 1958-1960 by the Ministry of Social Affairs and Labour, is as follows :

Age group	Number of blind	Per cent distribution
— 7	63	1.5
7—11	136	3.2
12—17	207	5.0
18—29	421	10.1
30—39	345	8.3
40—59	1041	25.1
60	1846	44.4
Not stated	95	2.3
Total	4154	100.0

Of the blind persons 2,435 or 58.9% were males and 1,719 or 41.1% were females.

The means of livelihood for the above persons were reported as :

Self-support	349	8.4%
Support by family	2443	58.8%
Support by relatives	247	5.9%
Assistance, mendicity	603	14.5%
Not stated	512	12.3%
Total	4154	100.0%

Tunisia

For Tunisia, information on age distribution is available for two Regions, namely Kairouan with 745 blind persons and Tozeur with 442 blind persons. These numbers were distributed on age groups, and with proportion in per cent of total as follows :

	TOZEUR		KAIROUAN	
Age group	Number	Per cent	Number	Per cent
— 5	2	0.4	9	1.2
5—14	9	2.0	67	9.0
15—24	10	2.3	669	89.8
25—34	34	5.4		
35—44	43	9.8		
45—54	86	19.4		
55—64	131	29.7		
65—	137	31.0		
Total	442	100.0	745	100.0

Causes of Blindness

In Table II the causes of blindness, according to their order of importance, have been listed for each of the countries from which information is available.

Iran, Kuwait, Somalia and Syrian Arab Republic in addition to ranking the causes have been able to supply information on the percentage which each of the listed causes contributes to the total blindness in the country.

It is evident that the importance of the various causes vary from country to country, but nevertheless Cataract, conjunctivitis and trachoma seem to be the main causes of blindness ; small-pox, malnutrition, injuries and glaucoma also contribute to a large extent, while congenital blindness and onchocerciasis should also be taken into consideration.

TABLE II

BLINDNESS LISTED FOR EACH COUNTRY ACCORDING TO THE ORDER OF IMPORTANCE OF THE VARIOUS CAUSES

REPUBLIC OF SOUTHERN YEMEN
Trachoma
Conjunctivitis
Small pox
Injuries
Congenital blindness
Malnutrition
Other causes

IRAN

Conjunctivitis	40.2%
Smallpox	16.1%
Trachoma	14.1%
Glaucoma	9.1%
Cataract	6.1%
Injuries	6.1%
Congenital blindness	2.0%
Other causes	6.5%

KUWAIT

Conjunctivitis	36.3%
Glaucoma	24.1%
Smallpox	18.6%
Trachoma	7.0 %
Cataract	3.5%
Congenital blindness	3.4%
Injuries	3.1%
Other causes	4.0%

TUNISIA
Trachoma
Conjunctivitis
Malnutrition
Injuries
Glaucoma

CYPRUS
Injuries
Cataract
Brain tumour
Congenital blindness

IRAQ
Conjunctivitis
Trachoma
Smallpox
Glaucoma
Injuries
Malnutrition
Congenital blindness
Onchocerciasis

SAUDI ARABIA
Smallpox
Trachoma
Conjunctivitis
Injuries

U. A. R.
Conjunctivitis
Trachoma
Glaucoma

ETHIOPIA
Trachoma
Glaucoma
Phthisis bulbi
Atrophia nervi optici
Injuries

JORDAN
Conjunctivitis
Trachoma
Smallpox
Malnutrition
Congenital blindness
Injuries
Glaucoma
Other causes

SOMALIA, Southern Region

Malnutrition	40.0%
Glaucoma	30.0%
Injuries	20.0%
Conjunctivitis	6.0%
Onchocerciasis	2.0%
Other causes	2.0%

FRENCH SOMALI LAND
Cataract
Injuries
Conjunctivitis
Trachoma
Small pox

PAKISTAN
Cataract
Trachoma
Malnutrition
Smallpox
Glaucoma
Congenital blindness
Injuries
Conjunctivitis

SYRIAN ARAB REPUBLIC

Various diseases	69.0%
Conjunctivitis	11.8%
Injuries	3.8%
Old age	2.7%
Other causes	11.0%

Pakistan, with its over 120 million inhabitants, has a mainly agricultural economy. Nearly 85 per cent of the population lives in rural areas where the medical facilities are either non-existent or unsatisfactory. In certain regions, private individuals, missionaries or government have established eye treatment centres, where the villagers get a chance to get 'seasonal' eye treatment.

First eye treatment on a mass scale was started in the Indian subcontinent nearly 50 years ago by an ophthalmic surgeon, Dr. Muthra Das of Moga, who organised eye camps in northern India, and performed cataract operations by hundreds in a day. There might have been several more before him doing similar work in other regions.

Sir Henry Holland, F.R.C.S., a missionary from England, started work in India in 1908 at Quetta, which is now in Pakistan. During the fifty years he spent in this subcontinent, he performed over 150,000 eye operations of which 80,000 were for cataract. His good name will always be remembered in our country for generations. His good work is still being carried on by his illustrious son Dr. Ronnie Holland, at Quetta, Pakistan.

Some other rural eye centres which need to be mentioned here are Taxilla, and Daska near Sialkot where seasonal eye relief work is being carried out. In 1952, the blind population in Pakistan was estimated to be over 400,000, totally blind, and with a rate of increase of 40,000 per year it is believed to have crossed the one million figure. Hence, there is a great need of prevention in the rural population through Eye Camps and Mobile Eye Clinics.

In 1959, a Society for Prevention and Cure of Blindness was formed at Karachi, with the initiative of Ophthalmic Surgeons and Philanthropists of the city. They have held 17 Eye Camps in the last 10 years, treated about 23,000 patients and their surgical team has performed 5,000 eye operations. This Society had the support of the Royal Commonwealth Society for the Blind, London, which helped them generously with funds for the running of these eye camps.

We have certain agencies namely the National Federation for the Welfare of the Blind at Karachi, West Pakistan Society for the Blind, at Rawalpindi, and several others, who provide vocational training to those already blind. Since they do not have any comprehensive prevention programmes, other agencies are coming up with these schemes.

Pakistan Medical Association, Quetta Kalat Region, has organised 5 eye camps since July 1968, in which they have treated 30,000 patients and performed 2,500 operations.

Muslim Eye Hospital established at Taxilla four years ago has treated 5,000 patients, operated upon 1,732 patients for cataract and other eye operations.

In East Pakistan, Jalalabad Blind Welfare Association of Sylhet, has held eight blind relief camps since 1965, its medical team has treated over 3,000 out patients and performed 800 operations for prevention and cure of blindness. Lions Club, Chittagong, also in East Pakistan, held its first eye camp in February, 1967, which has been a yearly feature and the surgical team provided treatment to 8,000 out patients and performed 850 eye operations.

There are others, not mentioned here, who have contributed towards eradication of blindness in the country. What I would like to stress here is the need for such work which is essential and most beneficial in the developing countries.

ACTIVITIES OF THE SOCIETY FOR THE PREVENTION AND CURE OF BLINDNESS, KARACHI IN THE LAST TEN YEARS FROM 1959 TO 1969

Camps	Cataract operations	Other operations	Total operations	Outdoor Patients	
				Eye	General
17	4485	1266	5751	17,805	1000

This Society started its mission against blindness in the villages of former Sind in West Pakistan.

Realising the great need of such service to these millions of villagers and people in remote suburban areas, a Mobile Eye Unit was found to be the only answer, to supplement the work of eye camps in villages and continue providing eye treatment to those who cannot afford it, because they live too far from city hospitals, which are already over-crowded.

With this in view, a new agency was formed in Pakistan in 1968, called the Mobile Eye Service of Pakistan, in collaboration with Royal Commonwealth Society for the Blind, London, which donated a Mobile Eye Unit for this purpose and provided financial assistance to run it.

Since the constitution of Mobile Eye Service of Pakistan, in December, 1968, its surgical team has already examined and treated over 25,000 patients suffering from eye diseases and performed about 2,000 operations for restoration of sight and prevention of blindness. This has been accomplished in a short period of *eight months* by holding 14 eye camps in different parts of West Pakistan. The details of the activities are as under :—

ACTIVITIES FROM 1ST JANUARY, 1969 TO 4TH AUGUST, 1969

S. No.	Date	Camp Area		No. of patients examined	No. of patients cured from blindness by cataract operation	No. of patients treated	Patients prevented from blindness by glaucoma operation and enteropian operation
1	2	3	4	5	6	7	8
1.	7-1-69 to 15-2-69	1st Dhadar		6000	750	5100	150
2.	21-1-69 to 16-2-69	2nd Mirpur Khas		3279	210	2995	74
	11-4-69 to 19-4-69	Anjuman Mufade-Niswan Drigh Colony		735	55	250	10
3.	20-4-69 to 26-4-69	Social Workers Association Drigh Colony		799	104	216	18
	27-4-69 to 30-4-69	School of Anjuman Mufade Niswan Drigh Colony-5		849	40	244	5
4.	1-5-69 to 8-5-69	4th Korangi K. Area		1300	90	341	16
5.	12-5-69 to 17-5-69	5th Korangi No. 1		979	103	227	18
	19-5-69 to 24-5-69	Korangi No. 6		981	59	278	4
6.	26-5-69 to 31-5-69	School at Korangi		628	1	122	—
7.	10-6-69 to 17-6-69	7th Landhi		780	128	450	102
8.	19-6-69	D. H. Q. Rahim Yar Khan		Nil	Nil	Nil	Nil
9.	20-6-69	8th Khanewal		5	—	3	Patients not operated.
10.	22-6-69	9th Jhelum		140	—	—	Patients not operated only O.P.D. treatment given.
11.	1-7-69 to 31-7-69	10th Phagwari near Murree		5970	208	5750	12
12.	28-8-69 to Date	11th Out Patient Camp, Drigh Colony		873	18	850	8
13.	13th Eye Camp at Korangi, from 12/9/69 to 20/9/69 total of 900 patients were treated.						

At the present 14th Eye Camp at Sandabad (Khokhrapar) which started from 22nd September 1969 to date, over 2,000 patients have already been treated. The camp is still in progress. It is organized with the help of Pakistan Medical Association (Karachi) branch. 37 Eye operations were performed during a 2-day operating session at this camp.

In about nine months, since Mobile Eye Service started work, a total of over 25,000 patients have been treated for prevention and cure of blindness and all treatments provided to these patients were free of charge.

The Royal Commonwealth Society for the Blind is going to expand these activities in Pakistan by adding two more mobile eye units next year, and it is hoped that the second unit will be started early next year.

Africa

The rural prevention of blindness programme in Equatorial Africa is mainly sponsored by the Royal Commonwealth Society for the Blind and its affiliated organisations in African Commonwealth countries but the Prevention of Blindness Bureau in South Africa also has a most impressive programme. In Equatorial Africa, 268,000 patients have been examined for eye diseases, 119,000 treatments were given, 4,365 operations for restoration of sight and prevention of blindness were performed, by the surgical teams assisted by the Royal Commonwealth Society for the Blind.

India

In 1968, in six regions of India, at the Eye Camps sponsored by Royal Commonwealth Society for the Blind, London, 6386 operations for the restoration of sight and 2704 operations for prevention of blindness were performed. In 1969, four more Mobile Eye Units are going to be added to the present fleet in India and 200 Eye Camps are to be sponsored by the Royal Commonwealth Society for the Blind, London.

The following are the statistics of patients treated for Prevention of Blindness at the following centres in India, by R.C.S.B. sponsored teams during the year, 1968.

At Madurai, 24,472 patients were treated, Mehta Eye Hospital, 42,000 patients were examined and 24,900 were treated, at Sitapur 56,400 patients were treated, at Almora, 17,721 patients were given treatment, at Vellore, 2,969 patients were treated. It is evident, therefore, that during 1968, 126,462 patients were given treatment. There may be others as well, who are not recorded here.

London's Royal Commonwealth Society for the Blind has played a significant role in organising different prevention of blindness activities all over the world. In 1968, their medical teams in 14 countries dealt with 410,000 patients with eye diseases, treated 267,000 mostly for conditions like trachoma in Africa, 7,965 patients had operations for restoration of sight in eye camps, mostly cataracts, and also an increasing number of corneal grafts, 6,434 patients had undergone operations for prevention of blindness, mostly for entropion and glaucoma.

These figures are 80 per cent higher than any previous year and represent the largest amount of prevention work of any international organisation in the world, and it will surely surpass these figures this year.

A Typical Rural Eye Camp Hospital of Mobile Eye Service of Pakistan

During the 'season', winter and spring, when outdoor camp living can be relatively comfortable, patients suffering from eye diseases, particularly those blind with cataract, flock in hundreds and thousands to these eye centres, where they have their sight restored. Many, however, become disappointed and have to remain blind either due to economic reasons or on account of over crowding because they fail to get treatment. Hence there is greater need of providing medical treatment to those in villages.

After having served in Rural Camps, I have experienced that a large number of patients report very late for treatment of blindness. Two factors are responsible for this, first, they think they cannot afford to pay medical bills ; second, they suffer from various apprehensions and misconceptions about the medical treatment. This is why we see many cases of hypermature cataracts, often associated with secondary glaucoma or absolute glaucoma. Most of the incurable blindness can be prevented by (*a*) making the people "eye conscious" and (*b*) by giving them early treatment.

(*a*) For developing eye consciousness, the help of social workers and social welfare agencies are needed.

(*b*) For providing early treatment in villages, establishment of eye camp hospitals and the mobile eye services are required.

A Rural Eye Camp Hospital is a temporary hospital established in a village preferably at a Rural Health Centre or a school or any building where patients can be examined, given eye treatment, operations may be performed in an improvised operating theatre and patients can be accommodated after operation. At this camp hospital, basic facilities like electricity and water are a help, however, improvisation with kerosene lamps and stoves for sterilisation of linen and instruments are done. The medical staff usually travels to an area where previous publicity about the camp by the local authorities and social welfare bodies, has created a favourable situation.

Junior medical staff and ancilliary staff which include theatre orderly, dispenser/compounder and ward boys arrive one day before the start of the camp and start treating the outpatients. Within a day or two senior staff for the camp usually a senior ophthalmic surgeon with postgratuade qualifications and experience arrives. And in no time, a full fledged camp gets into operation. Medicines, treatment and accommodation are provided to them free of charge. Nursing care is provided by the attending relatives of the patient and usually there is no dearth of them. Patients bring their own beds and clothing. They make their own arrangements for food but at times when locally raised donations allow it, these patients are even provided free food.

On an average, a camp lasts from 4 to 6 weeks, examining about 200 patients daily, and treating about 150 a day, an average of 60 to 100 cataract and other operations are performed daily with one surgeon, three assistant surgeons and three theatre orderlies. The operated cases are looked after daily by assistant surgeons and on alternate days by the surgeon.

The operated patients are discharged after 8 or 10 days, with cataract glasses, which restores their sight, and they go happily home with post operative medicines. It is a touching experience to see the happiness of these old people with their vision restored. The cost of one eye camp is about £ 1,000 and it can provide sight to at least 500 blind persons, costing hardly £ 2 per head, and approximately 2,000 - 3,000 patients get treatment and advice for prevention of blindness. The treatment cost per patient is about two shillings per head.

Role of Mobile Eye Unit

The establishment of rural eye camp hospitals alone is woefully inadequate to fight blindness in rural areas of developing countries of Asia and Africa. As in all such undertakings, lack of funds and facilities are a great limiting factor. But with proper and systematic exploration of all avenues of support and assistance, it is certainly possible to overcome this problem and secure an appreciable expansion of the facilities and services for prevention and cure of blindness.

While an eye camp serves a localised area, a mobile eye unit can take the treatment facilities to even remote rural areas, where the real afflicted people live in utter darkness without any hope. A mobile van, equipped with examining and theatre facilities, can play a great role in providing relief to a large number of patients daily by providing medicines and operations, if necessary. The mobile unit can also be used in association with rural eye camps whenever necessary. They can visit remote areas where there are no hospitals and direct the patients requiring operations, to the nearest eye camp hospital. It can go a long way in minimising the sufferings of these unfortunate human beings who cannot afford to seek specialist advice for eye ailments and remain in darkness just because they lack the means.

In a big city like Karachi with 3.5 million inhabitants, there are only two big hospitals which remain over-crowded, so a poor patient has to wait from 8.00 a.m. to 2.00 p.m. just to see the doctor and get a 'mini' bottle of eye lotion. The population is spread over a diameter of 25 miles, and the poor residents of outlying districts find it hard to get transportation, and they sometimes spend all day waiting and travelling before they can get either advice or eye drops.

It is precisely for this population that the Mobile Eye Service of Pakistan has started an out-patient service in the outskirts of Karachi, so that minor treatments can be carried out near their homes and only major cases be brought to the hospitals for treatment. This scheme is a great success and already the demand for holding these out-patient camps from different areas of the city are pouring in our office. It is sincerely hoped that the different governments and philanthropic organisations, particularly in developed countries would appreciate the importance of the programme for the prevention of blindness in developing countries, where millions of blind persons are in constant need of our help and assistance.

These developing countries can be helped a great deal by providing assistance and encouragement to those agencies that are already working towards the cause of prevention of blindness in their respective countries. Where there are no such agencies, they should be encouraged to form a nucleus around a government hospital in the region. Thus taking the help where it is needed is the only panacea for millions of sufferers from this scourge, who can only be helped by our dedicated efforts.

MALNUTRITIONAL BLINDNESS IN ASIA, AFRICA AND SOUTH AMERICA

By **Dr. G. Venkataswamy, M.S., D.O.,** *Vice-Principal and Professor of Ophthalmology, Madurai Medical College, Madurai, South India.*

I. How Malnutrition Causes Blindness

According to a survey of the World Health Organisation (1964), malnutrition is one of the major causes of blindness in Africa, Asia and South America. Extreme protein-calorie malnutrition with deficiency of Vitamin A results in keratomalacia (Corneal softening). In the advanced stages of deficiency, corneal xerosis occurs and the cornea becomes hazy and lustreless. Then localised softening of the cornea takes place and this leads to loss of cornea with subsequent complications leading to blindness.

Nutritional amblyopia (affection of optic nerve due to malnutrition) is a well recognised problem. Quite unlike xerophthalmia, this disease affects all age groups. The visual loss is usually of the same order in both eyes and varies with the intensity and size of the central scotoma. The marked degree of temporal pallor of the optic discs, going on to optic atrophy are usually found in these cases of Vitamin B Complex deficiency. The optic atrophy and fundus changes reported in infants with Beri-beri also may have the same cause.

Epithelial keratitis, occurring in the centre of the cornea complicated by ulceration and scarring is also seen in B-Complex deficiency though the pathological process is not as dramatic as in keratomalacia. Epithelial keratitis of Vitamin B-Complex deficiency causes economic blindness to some extent.

In nutritional deficiency, the susceptibility to infection is increased. The cornea loses its resistance and mild infections cause considerable ulceration of the cornea, resulting in blindness.

II. Total Number of Blind People in the World

In most of the countries in the world, there is no provision for compulsory registration for the blind and hence there is no reliable statistical data indicating the size of the blind population.

John Wilson, the Director of the Royal Commonwealth Society for the Blind, London has extensively studied this problem and in 1964, estimated that the number of the blind in the world was 14 million. The world's population in 1964 was 3,200 million and the blindness rate according to WHO estimate was 320. In this estimate, only minimum figures have been used, and deliberately ignored the fact that many countries count only totally blind. If the internationally accepted definition of blindness *i.e.,* vision 6/60 or less with the best possible correction in the better eye or a field of vision less than 20 degrees had been used, these figures would have been much higher.

In India, in 1931, the census department estimated the number of the blind to be 600,000. But when the Trachoma Control Project made a survey in rural areas in 1958-60, they estimated the number of economically blind in India to be 4.39 million. According to the latter study, the blindness rate is nearly 1,000. The Census department of Tamil Nadu State made a sample survey and estimated the blindness rate as 491 for this state. But in this survey only the totally blind were included. If the internationally accepted definition of blindness was used it would be much higher. A survey was conducted in North India at Sinhi and Dayalpur villages and the blindness rate in these studies was found to be 2,240, using the international definition of blindness. A similar survey was made in the Lambian village of Punjab State where 5.5 per cent of the people had vision less than 3 metres in this village and 8.4 per cent of the people were blind according to the international definition of blindness. So, to estimate the Blindness rate in India as 1,000 will be a gross under estimation.

In United Arab Republic, the blindness rate according to 1960 census was 355, but when a detailed study was made using International definition of blindness, it was found that the blindness rate in urban areas was 1,347 and for rural areas it was 4,679. According to the WHO epidemiological and vital statistics report, Volume 19, No. 9, the blindness rate for Kenya is 1,100, where blindness had been defined as vision less than 3 metres. In Ghana, the blindness rate is given as 3,000 with blindness being defined as inability to count fingers at 1 metre. So if internationally accepted definition of blindness is used, then the blindness rate in Asia and Africa will be definitely more than 1,000.

The estimated population of Asia, Africa and South America for 1967 is 2,436 million. Even if the blindness rate is taken as 1,000 for these areas, there will be 24.3 million blind people.

III. The total number of people Blinded due to Malnutrition

To estimate the number of people blinded due to malnutrition is still more difficult. Total blindness in malnutritional diseases is usually due to keratomalacia. Being an acute condition, it is difficult to make a survey of its incidence as it is not a notifiable disease. The eyes of patients blinded due to keratomalacia may be seen as anterior staphyloma, adherent leucoma, or phthisis bulbi. There are other diseases like irritant remedies, bacterial ulcers of the cornea which can give a similar eye condition resulting in blindness. So after some years, it becomes a difficult problem. In some cases, we have seen, even after 10 or 15 years, Bitot's spots, pigmentation and xerosis of the conjunctiva persisting in these people blinded by keratomalacia.

The people blinded by keratomalacia are usually from the poor socio-economic status and they are not able to give an exact description of the general condition which preceded the onset of keratomalacia. We examined blind children and blind adults in Palayamkottai Blind School and we found that quite a good number of them were blinded between the age of 1 and 4. When questioned what were the causes of their blindness, most of them said they had in their eyes a disease called in Tamil 'Amaram.' This is a vague term which included redness of the eyes with discharge.

In the 16 eye camps conducted by the Mobile Ophthalmic Unit, Government Erskine Hospital, Madurai, South India since the year 1964, 1 to 3 per cent of people attending the eye camps were found to be having malnutritional eye defects. Out of 998 total blind cases seen in the 11 camps in the year 1967 and 1968, 117 cases *i.e.*, 12.7 per cent were blinded due to malnutritional eye diseases.

There have been two surveys in Bengal about the incidence of blindness due to keratomalacia amongst hospital population. Somerset and Ghose (1951) recorded 4,047 cases of blindness among patients attending the Eye infirmary, Medical College Hospital, Calcutta, over a period of 2 years. Out of them blindness due to keratomalacia was found in 112 cases *i.e.*, 8.7 per cent.

According to the epidemiological and vital statistics report Volume 19, No. 9 percentage of blindness due to malnutrition in Gambia, Nigeria and Somalia were 1.5, 2.5 and 40 respectively. In Ceylon and India, it is 9 and 8. In Japan, Korea and China it has been estimated as 8, 8 and 2.9 respectively. From these figures, we estimate that nearly 5.5 per cent of all blindness is due to malnutrition in these countries. As the total blind population in Asia, Africa and South America is estimated as 24.3 million, the total number of blind people in these countries blinded due to malnutrition comes to about 1.3 million.

IV. Blindness in Children

Also it is possible to estimate the number of people blinded by malnutrition from the number of children blinded. In the countries in Asia, Africa and South America, the percentage of children in the age group 0 - 14 years in the total population is about 38. The population in these areas is about 2,436 million in 1967 and hence the population of children works out to be about 925 million. The Government of India has made an estimate in 1964 that there were about 400,000 blind children in India. For a population of 470 million in 1964, in India, the blindness rate for children can be estimated as 224. The Ministry of Education of India has estimated the blindness rate in children as 235. Blindness rate in school going population was 56 in Philippines as reported by World Health Organisation. John Wilson at the time of Oslo Conference estimated the blind population in school age group in the world as 660,000. Considering all these reports, we can roughly estimate the blindness rate for children of 0 - 14 years in Asia, Africa and South America to be 100. Then the number of blind children in these countries will be about 925,000.

According to WHO report on Global survey on Xerophthalmia, in 1942, in Ceylon, two thirds of the blind infants were blinded due to malnutrition ; in Kandy district of Ceylon in 1944, 44.6 per cent of the blind were reported to be blinded due to keratomalacia ; 32 per cent of the blind children in South Korea in 1964 were blinded due to this cause. In Haiti, 50 per cent of the blindness in children was due to keratomalacia. Three blind schools were visited by us and the children were examined carefully. In the blind school at Trichy, 26 per cent out of 55 students were found to be blind due to keratomalacia. In Tiruppathur blind school, 17 out of the 38 were blind due to this cause. In Palayamkottai school 39 cases out of 126 were found to be blind due to keratomalacia. The studies made at the above blind schools revealed that about 40 per cent of total blind children had blindness due to keratomalacia. From these figures, we can arrive at a conclusion, though less specific, that about 40 per cent of the total blindness in children in these areas is due to malnutrition *i.e.*, about 370,000 children. In the age groups of above 14 years, there will be a considerable number of blind people who were blinded due to malnutrition in their younger age.

In a study of 800 adults in Hong Kong, nearly 30 per cent of blindness was attributed to Ophthalmia/sub-nutrition. Hence it will be nearer to the truth if we say that at least double the number of malnutritional blind cases in children will be the number of malnutritional blind in the adult age groups. That is to say about 740,000 blind adults might have been blinded due to malnutrition. Thus the blind population due to malnutrition in countries of Asia, Africa and South America will be about 1.1 million.

V. Number of Children Becoming Blind due to Malnutrition Every Year

According to McLaren in 1963-64 a notification system for xerophthalmia cases was enforced in Jordan. The notification rate (*i.e.*, number of cases notified during the year among children below 6 years old x 10,000 total mid-year number of children below 6 years in that area) of 6.9 was higher than that for pertussis and nearly three times greater than the rates for poliomyelitis or diphtheria. Extrapolation to the rest of the Middle East gives about 10,000 xerophthalmia cases per annum and something of the order of 100,000 per year throughout the world. The total number of blind due to malnutrition in all these areas will be more than one million, in spite of high mortality in this age group.

VI. Malnutritional Blindness in Europe and North America

Even in countries in Europe and North America, blindness due to malnutrition has been reported. In Canada, there were 84 people blinded due to malnutrition among 24,600 registered blind. In Pennsylvania in 1941, there were 37 blind persons blinded due to malnutrition among 31,000 of the total blind. I had an occasion to see cases of malnutritional blindness in Berlin which had happened during the war. In Germany, out of 130 blind, 4 were blinded due to malnutrition. In Spain, in Malaga province, there were 13 blind due to malnutrition among 900 blind. In England, 19 have been found blinded due to malnutrition out of 30,795 blind people.

VII. Blindness Due to B-Complex Deficiency

Vitamin B-Complex deficiency causes blindness due to nutritional amblyopia or due to epithelial keratitis. Several reports are available from Africa and Asia about the incidence of nutritional amblyopia. No one has reported total blindness in the B-Complex deficiency cases but visual disability is very high in these cases. In the Eye Department, Government Erskine Hospital, Madurai, South India, in 1967, we had 692 cases with ocular manifestations of B-Complex deficiency, 22 were suffering from epithelial Keratitis due to B-Complex deficiency. Out of 68 cases who had Nutritional amblyopia 22 patients had vision less than 6/60 in both eyes. Dr. Siva Reddy has reported the high incidence of 4,800 cases of Nutritional Amblyopia in Sarojini Devi Eye Hospital, Hyderabad, South India in 1965.

A survey of the school children in Madurai revealed that

15 per cent were suffering from B-Complex deficiency and 6 per cent of them had Vitamin A deficiency. While ocular manifestations of Vitamin A deficiency are usually seen in preschool and school age-groups, ocular manifestations of B-Complex deficiency are seen in all the age groups. Though it is difficult to give the approximate number of people suffering from blindness and visual disability due to B-Complex deficiency, the problem is wide spread in all the developing countries.

VIII. Prevention and Cure of Malnutritional Diseases

The World Health Organisation has been making efforts to prevent malnutritional diseases in all the developing countries by programmes like Applied Nutrition Programme, training of nutrition workers in the community etc. The world population is increasing annually by some 34 million people, nearly 90,000 per day. Most of this increase is occurring in the economically under-developed countries, where the death-rate has fallen sharply in recent years, while the birth-rate remains high. The control of some of the major communicable diseases, such as malaria, has produced a dramatic decrease in the deaths of children in the first few years of life, and the population picture in such countries shows a preponderance of young people. There are two nutritional implications where the number of infants is high. First, during pregnancy and lactation the dietary requirements of the mother are greater than usual and, second, for a good deal of this period the mother is prevented from undertaking her usual quota of productive work. She and her infant at this time are a liability to the community and, should the infant fail to survive to an age when it becomes productive, there will be a net loss to the family and community wealth which, in an agricultural community, is directly measureable in terms of food. As public health measures become more and more effective, more and more children will, in all likelihood, survive into adult life if they can be fed. But the problem is immense. Although an increasing number of survivors may increase productivity and add wealth to the family and the community, the survivors themselves will beget children and add to the expansion of the population.

A Study on Vitamin deficiency in infants and young children in Jordan by Patwardhan and Kamel revealed that the absence of any visible change through the year in the serum levels of Vitamin A in infants treated with 100,000 mcg. in a single dose as compared to the serum Vitamin A in the placebo group is ascribed to the fact that the administered vitamin A was stored in the liver but not released in circulation except at a very slow rate. A defect in absorption was not considered responsible although conclusive evidence for this assumption is not available.

There were no significant differences in the growth rate of infants of the treated and placebo groups, nor was their disease experience through the year markedly different.

The results of the pilot prophylactic trial indicate the need for further work with infants and also in experimental animals with a view to elucidating some obscure points arising out of this study.

IX. Summary

Recent surveys in some of the developing countries, to estimate the number of blind according to the international classification of blindness gives the blindness rate as more than 1,000. The estimated number of blind in Asia, Africa and South America will be 24.5 million. Several surveys have been made to estimate the percentage of blindness caused by malnutrition. From various papers, we come to the conclusion that 5.5 per cent of all blindness is due to protein-calorie and Vitamin A deficiency in developing countries. So about 1.2 million are blind due to malnutrition. This figure is corroborated by estimating the number of blind children and calculating how many of them have been blinded due to malnutrition. The third method of estimation of the number of malnutritional blind is to estimate the number of children blinded due to malnutrition every year in these parts of the world and from these figures we can estimate the total number of malnutritional blind in the population. All these estimates show that not less than 1.2 million blind in these parts of the world have been blinded due to malnutrition, especially due to protein-calorie and Vitamin A deficiency.

There are a great number of people visually disabled due to B-Complex deficiency in these parts of the world. It is difficult to estimate the exact number but the problem is an immense one. Malnutritional blindness due to Vitamin A deficiency affects children usually between the age of one and five years and so the burden to the community and the individual is much higher than blindness occurring in old age. It is entirely preventable and all the agencies for the blind must do the needful immediately to eradicate this problem.

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PROFESSIONAL SESSION 6

Tuesday morning,
October, 14, 1969

RECREATION FOR THE BLIND IN A SCIENTIFIC AGE

Chairman : **Dr. (Miss) Claude Chambet,** *Secretaire Generale, Association "Pour les Aveugles," France*

CLUBS FOR BLIND ADULTS

By **Mrs Mary G. Patterson,** *National President, Canadian Council for the Blind, Canada.*

It is indeed a very great privilege and pleasure for me to have the opportunity of participating with the panel on "Recreation in a Scientific Age," and it is also a great honour for me to represent the Canadian Council of the Blind at the 4th General Assembly of the World Council for the Welfare of the Blind in this beautiful city of New Delhi.

From Canada, our greetings and best wishes are extended to all present for a most successful and productive Assembly, which will benefit all blind people throughout the world.

No topic could be closer to my heart than the one which has been assigned to me, "Clubs for Blind Adults," since I am deeply and enthusiastically involved in the promotion of such clubs across Canada.

First, let me tell you about the Canadian Council of the Blind, a national organiation stretching from the shores of the Atlantic to the Pacific, which is composed of 81 clubs of blind adults. It has a membership of approximately 4,500, serving French-speaking, as well as English-speaking Canadians. The Council operates under a Federal Government charter and our organization is administered entirely by blind persons on a voluntary basis.

Ever since the early 1900's, small groups of blind people have banded together for social purposes, or for the betterment of conditions for themselves and their fellow-blind. Around 1941, the idea was conceived that if all the existing groups were to unite, this nationally constituted organization might well become "the voice of the organized blind" of our country. The end result of a great deal of thought and planning was the formation, in 1944, of the Canadian Council of the Blind. We, who attended this meeting, were filled with ideas and enthusiasm for the betterment of blind people. Perhaps we were not too knowledgeable and did not know quite in which direction we were going, but, at least, we knew it would be forward. Our primary purposes can be briefly stated as these : to promote the organization of clubs of blind people throughout Canada, and, as these clubs become active functioning units within their Council, to co-operate on the club, division and national levels with the Canadian National Institute for the Blind, Canada's service agency for blind people, with the schools for the blind, with the Federal and Provincial Governments in Canada, and with the general public for the amelioration of conditions among Canada's sightless citizens in all areas of daily living.

In the early days, the Council was financed by contributions from the participating member clubs, but it soon became apparent that more stable financing would be necessary if the organization was to survive. In order to avoid confusing the public through multiple appeals for funds by the different organizations of blind people, it was decided to accept the offer of the Canadian National Institute for the Blind, which was, that if the Council would forego appealing to the public for financial aid, the CNIB would underwrite the cost of operating the Council on the local, divisional and national levels. This agreement was based on the understanding that the Council would have complete autonomy over its own affairs. It would formulate its own policies and enjoy complete freedom to administer its own activities in accordance with the needs and decisions of its members. Throughout our 25 years of existence, the Council's autonomy has always been respected and the CNIB has never used its financial support as means of influencing our decisions in any way, shape or form. If there have been times when the agency has not been in accord with our policy, they have never used methods of dissuading us, other than those used in democratic free discussion.

It is our conviction that membership in a club of blind people can do much to rehabilitate a newly blinded person by providing outlets for expression of his innate talents and acquired skills. It is our hope that such club activity as he can participate in will provide him with a stepping stone which will gradually lead him back to the normal life he enjoyed before the onset of blindness. Failing this, it at least provides him with group activity, thus taking him out of his own little circumscribed world of home, blindness and isolation, and contributing to the overall education, rehabilitation, and growth of the individual. He may have to adjust to living a different life, but it need not be one of complete dependence.

The strength of our organization has always been in the enthusiastic support and participation given by the individual club member in affairs affecting him or his fellow man, whether it be local, national or even international. For he, too, like his sighted counterpart, does not enjoy being told what he will or will not do, but is, for the most part, willing and anxious to co-operate if the decision concerning his welfare is left in his own hands.

According to geographical location, Council clubs are divided into divisions, thus while there are ten provinces in Canada, there are only eight Council Divisions because three of the provinces are smaller than the others and, therefore, are grouped together and considered as one division. Each Division is headed by a Divisional President, assisted by a Divisional Board of Directors, and a number of appointed committee chairmen. They meet annually. Once a year, a delegate (or delegates, depending upon the size of the club) is elected to attend a Divisional meeting to voice his club's opinion on matters concerning blind people. From among this divisional gathering, a number of delegates are elected (also according to the size of the division) to attend a national convention every other year, to discuss and formulate policy as it pertains to the operation of the organization on the national level. Here, too, projects are initiated and put into action to assist blind people in other less well endowed countries. Only blind persons can vote on matters pertaining to the Canadian Council of the Blind and this means therefore, our expressions and suggestions come from those who have experienced blindness for either part or all of their lifetime.

At the pinnacle of the organization, and acting as spokesman for the organized blind in the country, presides the National President, supported by a first and a second vice-president, who co-ordinate the activities of the different members of the National Board of Directors. The directors also act in the dual capacity as chairmen of standing committees.

To assist the National President in carrying out the instructions and policies formulated at national conventions, she is provided with the services of a staff of paid employees in the head office, which is situated in London, Ontario, Canada ; all other personnel, as stated before, being unpaid volunteers.

Our National and Divisional programme of standing committees : Finance, Legislation, Public Relations, Education, Recreation, and Employment, Services and Research.

The Committee on Finance regulates the expenditures of the Council and rules on matters of financial policy.

The Legislation Committee works to improve the legislative needs of blind people. For a number of years, The Canadian Council of the Blind and the Canadian National Institute for the Blind have made approaches to the Government of Canada for improved legislation for the blind. Under the Blind Persons Act, which was passed in 1951, a blindness allowance is given to sightless persons between the ages of 18 and 65, only if they qualify under a strict means test. Therefore, in order to meet the rising costs of living and to compensate for the loss of sight, the CCB and the CNIB began, in 1968, an intensive campaign to request that all blind Canadians, from the age of 18 years, receive a universal allowance to be administered and paid by the Federal Government. This allowance should be exempt from Income Tax and not be considered as income in welfare computation.

The Public Relations Committee provides information for the sighted public about the needs and capabilities of the blind. In 1945, the Council decided to sponsor Canada's first White Cane Week and to invite The Canadian National Institute for the Blind to participate. Since then, White Cane Week has been conducted annually by the CCB and the CNIB. This is not a fund-raising project, but an educational programme designed to inform the public about the needs and capabilities of sightless Canadians and also to point out to them the importance of eye care and prevention of blindness.

The Education Committee seeks to promote measures which will improve educational facilities for blind youth and to provide projects of an educational nature for CCB clubs. Another phase of education in which the Council is actively engaged is the promotion and encouragement of self-improvement courses in our clubs. Such courses as parliamentary procedure, effective speaking, good grooming, and others have helped our club members to present a better appearance, and to speak and think more clearly at our conventions, while helping them to develop their maximum potential for self-direction, self-determination and personal independence. This, together with the executive experience the members have gained, has been helpful to the service agency as well, because members with potential have thus been discovered and developed for CNIB staff positions later on.

The Recreation Committee promotes indoor and outdoor recreation and entertainment for the social rehabilitation and enjoyment of blind persons. Alley bowling is a universal sport in which blind people participate enthusiastically. There are trophies for the various types of bowling—five pin, ten pin, candle and duck pin, as well as lawn bowling and miniature table bowling. Competition (local, provincial, and national) is keen. Braille-marked bingo and playing cards enable the sightless person to participate in card games with sighted companions. Special adaptations to the games of chess, dominoes, checkers, etc., have made these forms of recreation possible. Other activities which club members enjoy playing are : curling, cribbage and golf. Of particular interest are the summer holiday centres across Canada which are operated mainly by the Canadian National Institute for the Blind, but it was the Canadian Council of the Blind which initiated the idea of summer camps for sightless people. The recreation programme includes similar activities that are used at vacation centres by sighted people. The rehabilitation value to a newly blind person participating in these programmes is a great source of help to him in becoming adjusted to his handicap. For instance, in 1968, scuba-diving and water-skiing were introduced at one of our holiday centres, and were participated in by totally-blind people as well as those with partial vision.

The Employment, Services and Research Committee studies new fields of employment for blind persons and makes recommendations to the CNIB on the basis of their research. They also report on any literature received concerning employment for the blind.

The Canadian Council of the Blind publishes a quarterly magazine known as "The CCB Outlook," which is sent free of charge in inkprint or braille to any person requesting a copy. I am sure that many who are present at this Assembly already receive our magazine and I hope that you find it interesting and informative.

The Council maintains external contacts with organizations such as the American Association of Workers for the Blind and the World Council for the Welfare of the Blind. Since 1948, the Canadian Council of the Blind has been greatly interested in the developing countries overseas, and contributions are made annually to the Royal Commonwealth Society for the Blind and the American Foundation for Overseas Blind to be used for this work. In the past eighteen years, the CCB has contributed $ 31,000. This includes $ 10,567.19, which was given by CCB Clubs during Canada's Centennial Year for the purchase of a Mobile Eye Clinic, plus its maintenance for two years. This clinic, which bears the inscription, "Presented by the Canadian Council of the Blind to the people of India through the Royal Commonwealth Society for the Blind," is now being used most successfully in Madurai, India.

Since the 25th Anniversary of the CCB is being held this year, our clubs have pledged to hold special activities. The funds derived from their projects will be sent to Madurai to assist further in the maintenance of the Mobile Eye Clinic which we donated.

It is our belief that clubs organized for the benefit of blind persons, enrich not only the individual, but also the community. The club provides a meeting place where blind persons may gather in an understanding group, take part in recreation designed to their needs, learn to take responsibility and fill the many committee posts that accrue in every organization. This is why we speak of the clubs *OF* the blind instead of clubs

FOR the blind. Through having members who are active and informed, we project a better image of blind people to the public ; we help blind persons to be more aware of *THEIR* responsibility to society to give rather than to always receive. We try to provide the stimulus to make members aware of the need for social competency and to help them attain it. Last, but no means least, the club develops the talents of its executive members and club members through teaching them responsibility and thereby producing leaders.

The club provides a forum for self-expression and assists the blind person's desire to be active, self-motivated, responsible and self-confident. In the beginning he may need motivation, assistance, interpretation, or guidance support, but, as self-confidence is instilled and skills developed, he gradually accepts more responsibility for planning and carrying out his own recreational experiences ; and, begins to move toward independence. All this helps to bring about readjustment to his handicap.

It must be borne in mind that all clubs are not organized on a formal basis. Even the elderly blind citizens over the age of 70 are not forgotten. While not formed into organized clubs as such, they, too, are encouraged to meet and enjoy programmes planned especially for them—the purpose of which is to supply a pleasant occupation for those who otherwise would have little to do but think about their problems. Sometimes, in metropolitan areas, blind ladies get together on a regular basis in order to exchange news, views and recipes. In more densely populated areas, where several deaf-blind persons are located, special parties have been designed to their needs. Volunteers learn the manual alphabet and keep them in touch with what is taking place. In Toronto, one of our larger cities, seven doubly-handicapped people were given a series of weekly swimming lessons. To watch their escorts explaining hand-to-hand the directions of the instructor was truly inspiring. The deaf-blind did not become expert swimmers, but they made remarkable progress—most important, they enjoyed fellowship which in other times would have been denied them because of their handicap.

In its early stages the Council adopted as its motto, "Faith, Service, Fellowship," and it has tried to live up to it. "Faith" because we have faith in each other, trusting each other's wisdom and good judgment. "Service," because we recognize the difficulties and problems of each and are always ready to lend a helping hand if necessary. In so wide a territory as our country, situations are bound to arise, but, we have yet to encounter any problem which could not be solved by free and open consultation. "Fellowship," to strengthen and increase our common bond.

It is my hope that the information which I have provided on the successful operation of adult clubs for the blind in Canada has proven that there is a great deal of value and feeling of satisfaction in having the opportunity of meeting and discussing problems, ideas, etc. with other blind people. I would recommend highly the establishment of a similar organization in other countries.

Thank you.

SPORTS AND HOBBIES FOR THE BLIND

By **Mr A. D. Lloyds,** *Secretary, St. Dunstan's, England*

Recreation has been described as a complement to work and as a need for all men, and it is on this broad basis that I propose to discuss sports and hobbies, as they can be applied to persons without sight. I shall not, of course, be looking at these two subjects in the sense of professionalism or as full-time remunerative activities, but rather as essential parts of a man's life and as adjuncts to recreation.

Since the start of civilisation, recreation in one form or another has helped man to find pleasure and satisfaction in the use of his capabilities and has provided communities with amenities for the social needs for their people ; over the centuries, with growth and advancement of both a physical and mental nature, more and more facilities and opportunities for recreation have become available, and today there can scarcely be a community where some form of leisure activity is not available. Much has been both said and written, of the advantages of participation in some form of recreational pursuit—be it active or passive—both for the sake of physical fitness and as a means of social contact.

With the growth and development of services to the blind much has been done to integrate blind persons into the community and there has been an increasing awareness that recreational activities can play their part whether in the field of sport or in the nature of hobbies—in groups or suited to individual needs. The frustrations so often experienced by those who lose their sight in early and later adult life, have been immensely mitigated when the blind man (or woman) finds that he or she can still follow some interesting pastimes, akin to those to which they had been accustomed before they lost their sight. In a similar way the school leaver who will have taken part in recreational activities during the course of his educational studies, will find much encouragement when he is able to continue with such activities in some form or another when he leaves school and goes out into the world.

At St. Dunstan's, the Organisation in the United Kingdom which is responsible for the care of blinded ex-servicemen and women, new members are always encouraged to take up or to maintain an interest in a sport or hobby, and when rehabilitation and training are completed and the trainee returns to his home to be settled in an occupation, every endeavour is made for him to continue with his favourite pastime. In addition special functions are arranged from time to time so that all interested members may have an opportunity of taking part in organised gatherings concerned with their particular activity.

It will now be convenient to discuss the two subjects of Sports and Hobbies separately :—

Sports

Whilst blind persons can participate in most sports—and aids have often been devised or adaptations made so that a favourite sport can continue to be enjoyed—there are some in which they cannot take part and it is wiser to encourage them to follow one in which they can achieve a degree of success.

Sports are a form of leisure, an antidote to work and something to be enjoyed, a means of keeping mentally and physically fit ; most are competitive and competition can fire enthusiasm ; in many sports blind persons can compete with sighted colleagues, and this inspires confidence and is an asset in the conquest of blindness.

St. Dunstan's has, since its inception in 1915, arranged organised field sports for its members, and for many years Annual Sports Days have been held ; naturally with the passage of time and because of increasing age, the majority of our older members no longer take part in the more energetic events, but our younger members still look forward to our Annual Sports Day. Last year we invited members of Associations for the War Blinded from European countries to join us and we held our first ever International Sports Meeting for the War Blinded at our Holiday Centre on the South Coast.

Field sports in which blind persons can take part include sprinting, discus throwing, medicine ball shot, and long jump, and do not need detailed description. There are, however, a number of open-air sporting activities, which are not field events and I should like to mention these in some detail.

Rowing. This was a popular sport for the blinded ex-servicemen of the First World War, when St. Dunstan's had its training centre in close proximity to one of the larger London lakes. With a sighted person to cox or steer the boat, rowing is an exhilarating exercise, giving a feeling of harmony and team spirit, and competitive rowing was soon forthcoming ; even one-armed men could paddle canoes or row in pair-oared boats. Annual regattas were held on the river Thames and elsewhere, and not only did St. Dunstaners race against themselves and against the boys of Worcester College for the Blind, which has a tradition of rowing over many years, but against sighted crews on equal terms.

Football. Of all sports for the sighted in the United Kingdom, football is undoubtedly the most popular, most played and most watched, and whilst some blind persons enjoy going to matches or listening to commentaries on the radio, it is obviously unsuitable for the blind to play.

During the last few years, however, an adaptation of this game has been devised for the boys at Worcester College ; it is played on a hard surface of some 120 ft. x 60 ft. surrounded by a 10 ft. high wire-mesh fence. A standard size football is used in which small steel ball-bearings have been inserted so that the ball rattles when moving. The game is usually restricted to six or seven players a side and the goals are boards measuring 8 ft. x 3 ft. Players need a good sense of direction but it can be a most enjoyable game for fit young men, and one which can be played with very little equipment.

Cricket has also been adapted at Worcester and a similar ball as is used for football, has been found to be the most suitable.

Road Walking. This is a popular sport with sighted persons and there are many Road Walking Clubs in the United Kingdom ; the blind can also enjoy it, walking with an escort holding a connecting tape. For a number of years St. Dunstaners have taken part (with sighted competitors) in a Walk of 52 miles from London to the South Coast and some have done the return journey the same day—a distance of 100 miles in twenty-four hours—thereby earning the title "Centurion." Shorter Walks are arranged regularly in various parts of the country.

Bowls. Many blind men enjoy this game which additionally provides opportunities for meeting other people. They use the same equipment as sighted bowlers, but a sighted marker is required to indicate the position of the jack ; this is done by hand-claps or whistle and the bowling mat is used to indicate position. A St. Dunstan's bowls team regularly plays matches with sighted teams. Bowls has been taken up with great enthusiasm by the blind in Australia and New Zealand.

Swimming. This is a most popular sport, enjoyed by many blind persons. A poor sense of direction can be a difficulty, but in a swimming bath a line of floats will help, particularly in competitive swimming. In any event sighted swimmers usually need marked lanes when taking part in races to prevent them from impeding other competitors. An individual blind swimmer in a swimming bath or in the sea should of course have a sighted companion with him, though the sounds made by other swimmers in the water can help him to keep his bearings.

Braille Car Rally. This is a new "sport" which St. Dunstan's introduced at their Sports Weekend a few years ago ; it was taken up with enthusiasm. A blind "navigator" accompanies a car driver, and from instructions in braille directs the driver as to the route to be followed, the latter using his knowledge of the district to carry out the instructions. Questions on various points on the route require answers and secret checkpoints, penalty marks, etc. are also involved. There is a time target and bonus points are awarded for say, completion 5 minutes either side of target time and penalty points for time both in excess of, and less than, target time (the latter indicates excessive speeds). Points are also awarded for correct answers to clues.

Most countries have their own national or favourite sports, not all of which can be readily adapted for the blind. Nevertheless, there are instances where a blind person has taken up a sport which might appear improbable and has, through practice, become accomplished in it. An example is skiing, the very popular sport in many European countries ; there are instances of war blinded persons who, after losing their sight, have successfully followed this activity again—they have had to learn new techniques and put in much hard work, but they have proved that skiing is possible for blind persons of the right ability and enthusiasm ; they must however work in close co-operation with a sighted instructor.

Another activity which has been taken up by a few individuals is horse-riding ; provided one has a steady horse, a good ride is a practical proposition, so long as the rider accepts the limitations and keeps within them. Hiking and mountaineering are pursuits enjoyed by some in company with sighted companions, and it is a matter for congratulation that earlier this year seven blind African young men successfully climbed the 19,000 ft. Mount Kilimanjaro.

Golf is played by a few enthusiasts, accompanied by a skilled companion. This game has been followed to some extent in Canada where a Blind Golfers' Association was formed. Other enterprising blind individualists are known to enjoy small boat sailing and water-skiing.

I will now mention a few other activities which although not strictly sports, can be conveniently dealt with under this heading.

Darts. This is almost a national pastime in the United Kingdom. Blind players memorise the position of the numbers on the target, and some hold a cord attached to the bull's eye in the left hand as a guide to direction ; the foot position is indicated by a raised strip of wood or metal.

Ten Pin Bowling. Essentially ten pin bowling consists of trying to knock down ten pins (skittles)—set up in a triangular formation at the end of a narrow alley—by bowling at them a large solid ball. This is a derivation of the old English game of "skittles" and it does not require expensive equipment or need much space. In recent years the construction of playing areas has become much more sophisticated and can include an electronic device showing the position of the pins remaining standing after each throw. At the end of each game automatic devices re-erect the pins which have been knocked down and return the balls for the next player. Tactile equipment can be installed for scoring for blind players.

Shooting. St. Dunstan's has adapted a .22 rifle, mounted on a swivel stand, for use on a 25 yard indoor range. A secured circular metal ring surrounds the rifle barrel and both the ring and the barrel are wired to a twin beat frequency oscillator, the timing of which is varied as the position of the barrel is moved relative to the ring. A very low note, heard on earphones or through an amplifier, indicates that the barrel is in the centre of the ring and in line with the bull's eye, higher notes indicating that the rifle has moved from the centre of the target. The system has been modified for a handless man by fitting a foot pedal to operate the trigger, and for the deaf-blind by a tactile stimulator instead of the usual audible signal.

Fishing. A few blind men have taken up this sport and some have become quite expert at it. Sea fishing and fresh water fishing are both equally popular, and some of our more enthusiastic fishermen make their own rods during the months when they cannot go fishing.

Gymnastics. Very little adaptation of equipment is necessary, and many younger adults can derive benefit from gymnasium exercises, but for certain eye conditions vigorous bending, weight lifting, etc. can be harmful and limitations may have to be made medically for those with other physical disabilities.

For gymnastics at a Centre, expert supervision is most advisable ; but individual blind persons often have a piece of equipment in their own home for exercises, *e.g.* rowing machine, stationary bicycle, chest expanders, Indian clubs, etc.

Card and other games. Most indoor games have been adapted for use by the blind and are played not only at social centres but also in a person's home. Card games, using braille cards, are very popular and Bridge is played quite extensively by St. Dunstaners. A Bridge Club has been in existence for over thirty years and in addition to competitions between themselves, matches are played with Clubs of sighted players ; courses of instruction are arranged for beginners each year by St. Dunstan's. Chess and dominos are other popular indoor games.

Bingo, which can be played with small groups as well as large numbers, is another popular pastime and adapted boards are available so that the game can be played without sighted assistance.

Hobbies

There is almost as wide a variety of hobbies available to the blind as to the sighted, and in the experience of St. Dunstan's the great majority of our members follow some form of pastime—indeed they are encouraged in this whether they are working or unable to do a full-time job owing to poor health or increasing age.

For those blind persons who cannot take part in, or do not have the desire for a physical activity, a hobby is very necessary as it encourages concentration and the co-ordination of mind and hand.

Crafts. A variety of handicrafts including basketry, weaving, ceramics, wood-, metal-, and leather-work, can be followed very successfully by the blind. They are best taught at a community centre and there are many organisations maintaining such centres, frequently in conjunction with other social activities, and where qualified instructors are available. Group tuition encourages the learning of new skills and rekindles interest in forgotten skills.

In many countries craft work can be a blind person's livelihood, in others it is regarded as a pure hobby or pastime. It is, however, always advisable that articles produced should be well designed and functional—in this way the blind craftsman can experience satisfaction in his achievements. Sometimes there are special arrangements for the disposal of craft articles made by blind persons, such as the holding of exhibitions, which in addition to articles made by the blind often also display those made by other handicapped persons. In the United Kingdom very successful exhibitions are frequently held of craft work made by ex-servicemen of all disabilities.

Gardens. St. Dunstan's encourages any of its members who are so interested to take up light garden work, often with the addition of a greenhouse ; advice is given when needed and many men have become proficient in the growing of flowers and vegetables—indeed a number win prizes at shows in competition with their sighted colleagues. This hobby is followed mainly by those who have retired from active work and by some younger men who are unable to work but who are interested in an open air activity. Sometimes poultry are also kept, and this, together with work in a garden and greenhouse, can be very satisfying. Garden produce can often be sold, thereby bringing in a small income to the grower.

Music. As is well known, there are a number of professional blind instrumentalists and singers and composers, too. Others learn to play an instrument or to sing, mainly for their own enjoyment and that of their friends ; even men with hand amputations have been taught to play various instruments when suitably adapted.

For some years there was a St. Dunstan's Dance Band, and during their training days the ex-servicemen of World War II organised concert parties and put on ambitious revues ;

a number of concerts were promoted to help other organisations assisting ex-servicemen, such as the Red Cross.

There have been, and still are, many choral societies and choirs comprised entirely of blind persons, and public performances are given.

Play Reading Goups. This is a recreational pursuit ideally suited to blind persons, particularly those who are good braille readers, interested in drama and sound. Dramatic reading productions are produced in much the same way as radio plays—braille scripts are used together with special music and sound effects recorded on tape. No scenery, costumes or props are used, and through their voices alone the players must create the characters and atmosphere.

"Ham" Radio. Radio has always been an ideal medium for information and entertainment for the blind ; in recent years there has been increasing enthusiasm amongst some to become "hams"—amateur radio operators who transmit and receive. This unfortunately is an expensive hobby requiring special equipment but can be immensely stimulating because from one's own home one can talk to other radio "hams" in all parts of the world ; a "ham" needs to learn the Morse code and pass an examination before obtaining a licence to operate on the air.

Carpentry. This hobby allows ample scope for ingenuity and imagination in the construction of unusual and interesting articles ; one St. Dunstaner makes attractive bird nesting boxes to his own design, another has made altar furniture for his local church, including two 4 ft. candlesticks in oak. Yet another designs and makes clock cases standing some 4 ft. high, for his friends both at home and overseas.

Miscellaneous. A member of St. Dunstan's blinded in the First World War, makes model miniature vertical steam engines, using a small lathe to produce the various parts. Another who is deaf-blind is adept in constructing model boats, using the wood of empty cigar boxes as the main material for these—the late Sir Winston Churchill used to send him some cigar boxes from time to time. A cane worker, in addition to making the more traditional articles, has been successful in making display accessories for use in shops and at exhibitions.

Dancing has always been very popular amongst St. Dunstaners of all ages and regular weekly dances are held at their holiday home ; some of the more enthusiastic dancers have entered competitions for ballroom dancing and won prizes.

Often a blind person will take an active part in local government affairs, committee work and in joining and helping to run Clubs, sometimes for others who are handicapped—this can then become one of his main interests and a very satisfying one too.

Participation in hobbies should at all times be encouraged, whether as part of rehabilitation programmes, at social centres, or amongst those who may be housebound and unable to take part in group activities. The elderly may well be restricted to crafts and indoor games, but amongst those who are younger, other and more active pastimes should be considered. By these means blind persons are helped towards a fuller life, will be enabled to widen their friendships and acquaintances and will be assisted in overcoming their handicap.

RECREATIONAL MUSIC

By **Prof. Guglielmo Vassio,** *Italy*

Up to a few decennia ago, blindness and music formed an inseparable binomial : a commonplace idea deeply rooted in people's minds. Music was the companion of the blind beggar who had somehow to appease his own hunger, but it was also the faithful mate of men intellectually gifted, who had the chance to attain a high artistic level : composers or players they were.

As a matter of fact it is beyond any doubt that, among the arts fully open to the blind, music keeps the first place. This is attested by the numerous names by which the known historical times are dotted, not to mention those that the legend handed on to us. If many among them are famous musicians, more and more numerous were obviously the music lovers who even though not attaining the upper spheres, made of music the only object of their own lives, their highest ideal.

At this point a question arises : what drives the blind man to devote himself to this Art ? Of course sometimes the necessity to earn his own living, sometimes the need to express the impulse of his own soul, but in fact and above all is the natural law of compensation.

A lot of handicapped are there to testify that, thanks to music, they not only became reconciled with life, but were also able, through their writings and good example, to show to others the right way to go along if they intended to improve, to raise and to redeem themselves.

"He who does not love music does not deserve the title of man ; he who loves it is just half a man ; he who practises it is a complete man." That's what Georges Duhamel wrote. To prove it I could cite the inquiry I made through international contacts ; inquiry from which clearly emerged that to the remarkable improvements in the economical field reached by blind in many countries—due to the scientific progress and the social evolution—match the symptoms of an evident relaxation on the cultural and moral level.

Well, such a relaxation is certainly due also to the fact that blind are gradually abandoning the study of music ; or at least, to the carelessness with which they start the youth on their studies. Our children aim too soon to settle themselves in a culturally less blinding activity obtained through a much easier preparation. That makes them lose any enthusiasm for study, any capability of fighting ; above all, they have no more stimulus to raise themselves.

We don't want, of course, to reprove the social progress and even less the efforts made by those who manage to smooth the way for our youth and to find new working-outlets for them. Absolutely not! We wish only to emphasize and warmly recommend that, in addition to the specific training—in accordance with the necessities deriving from new available works—everything be tried to give a new impulse to the cultural preparation and to reserve to music its fair place in the educational training of blind people.

In other words, we want to recall the educator's attention to the opportunity that this art be taught by qualified and efficient teachers in every kind of schools for blind youth: from the sunshine to the elementary school, from the secondary to the professional one. This would definitely enrich the student's mind and spirit and, in a very short time, we could appreciate the real benefits. That would also make the teacher's task easier (because we must not forget the effective sensitiveness usually peculiar to blind pupils) and would give them unexpected satisfaction: the noblest among all rewards.

Let us quote Duhamel again: "When I think how much good music can do, the wealth it brings in, the nobleness it gives to those who practise it, the influence it has on our thoughts, feelings and emotions, I am really amazed that its teaching is not yet compulsory and spread all over resolutely. Somebody will say that some students do not like and do not understand music; it would therefore be useless to insist on teaching it. But it looks strange that the same objection has never been raised as far as reading and writing are concerned. Only the weak-minded and sick people are to-day abandoned to the terrific sort of ignorance. But I do believe that a day will come when also music teaching will be just as compulsory. As a matter of fact the space reserved in our school programmes to this art, that gives so much relief, joy and impulse, is at present extremely poor."

If this can be said for sighted people—who luckily have a lot of ways to amuse themselves and enjoy life in this restless century in which, to aim at beauty and goodness, seems to be considered utopian—the more must be emphasized for blind people whose possibilities and amusements are so limited.

It happens very often to me to meet some blind adults who, as soon as they have some spare time—after a tiring day spent in rehabilitation courses—sit at their piano, play the guitar or accordion or even sing. In that way they get the necessary relaxation which helps them to go on, and to get the strength to accept their hard situation. To do that they often have to brush up their musical knowledge acquired in their childhood. It is obvious that one cannot enjoy music, even as an amateur, if he did not receive a good technical and aesthetical preparation during his infancy. That is why the most known pedagogists of music—as Jaques-Dalcroze, Orff, Ward etc.—particularly addressed their attention to the children since their first years of life.

Somebody could say: but it has never been so easy to listen to music as it is to-day! We just have to push a button or turn a knob and we can hear any kind of music we like. Many students—and even grown-ups—cannot work if there is not a radio or television sounding in the background!...... That's perfectly all right! but it is exactly from this "mass media music" that we have to beware! We must agree with the best didactic-lovers that this continuous intrusive presence of music in our every-day living, makes musical education more necessary. As Delfrati says, "we must train children to music to free themselves of music: and this is not a paradox as it looks to be!" Environment alone cannot do it. It only compels children (and not only them) to react to the intruding of sounds through the most elementary form of defence: passiveness.

As a matter of fact in this milieu music cannot have anymore an autonomous value, as its own way of expression. It becomes only a sterile background of the every-day life: sometimes a vice, that is then quite difficult to overcome. One thing is to reduce the hearing of music to a passive habit useless and annoyed and another thing is to consider it as an active means of a relaxing recreation which can give that winding absolutely essential not to be overwhelmed by the anxious, harmful, pathogenous whirl of the hasty and dynamic present life.

We just said that musical education has to be based on rhythmics, on the dance, on the figurative interpretation, on the active listening, on the execution and invention of pieces of music and of songs which recall in the child personal and joint feelings and develop his sense of harmony and order. But all that—especially in the sunshine schools—has to be obtained just through the amusement without any compulsion. In other words it must be essentially recreational music in the highest meaning of the term. To learn, the child has to find an amusement in what he does.

Plato said that nature is harmony and what is out or against nature is disharmonious. Well, in the present time, in which the world seems to become smaller day after day, and everywhere the necessity of developing a social feeling and a spiritual comprehension of people is realised, no activity seems to be more suitable to reach such a harmony. There is no modern pedagogist—from Froebel to Montessori, from Macpherson to Scholes—who has not pointed out the opportunity of favouring the development of the child's personality through a musical training.

It is well known that, using the Orff's "method" and "instrumentarium, it is possible to inculcate in children's minds a sharp rhythmical sense, that can often allow performances of a considerable propaedeutical level highly formative.

Even more interesting and admirable is the work done by the Japanese pedagogist Mr Shinishi Suzuki who, starting to teach to kids under 3 years of age nothing less than violin, is able to put together instrumental and vocal ensembles, formed by children 4—5 years old, who can perform pieces by Purcell, Corelli, Vivaldi etc.

During my teaching career I had the chance to give my attention in favour of children under six years of age, having no musical hearing whatsoever. Taking care of them with patience and love, it has been possible not only to correct that serious imperfection, but to get out of them some very good musicians.

Such a result cannot, of course, be obtained if the pupil has already exceeded his infancy, but let us consider how many among them lost every chance to get from music an essential recreational help and sometimes even a source of work (and you know what that means for a blind person!) just because of the negligence and the lack of conscience of those who had to take care of them.

If the musical education has been settled on the solid basis we mentioned above, no difficulty will arise later on in the elementary schools where an active and methodical listening, along with the choral singing, has to be intensified.

Choral singing will be at the beginning at one voice and later on, progressively, at two and three voices, in homophonic, polyphonic and canon compositions.

It would take too much time to examine the polemics started by the American Frances Clark and revived by the British Mr Scholes, on the opportunity of using or not, subsidiary means such as the radio, gramophone or tape-recorder.

For the same reason we cannot refute the arguments opposed by Macpherson and Read. We shall only generically say that "in medio stat virtus": "virtue stays in the midst."

Anyway, as far as hearing is concerned, it will be advisable to start with "depictive music," accompanied by easy analyses—suitable to the receptiveness of the class—and by a short account of the Author's life and work. A few anecdotes will be very helpful to illustrate and engrave in the children's mind the personality of the musician concerned and to set him in his historical milieu.

It will be important for the blind—more than for the sighted—the help of eurhythmics which, if well conducted, make all movements more gentle and nimble.

Extremely important is also to start off the children in the study of an instrument, which has to be chosen according to **child's** peculiar gifts and trends. After the rediscovery of the ancient instruments by Dolmetsch, the recorder must be considered a very suitable instrument for students.

I can add, as a personal experience of mine, that in only two years of teaching in the sunshine and elementary schools of the Institute for Blind of my town, when I had already a background of 35 years of experience as a private teacher, I obtained the most alluring results. As a matter of fact music and song are now for my pupils the subjects they like the best.

It is obvious that the more the teaching will be based on modern methodological criteria in pedagogics, didactics and psychology, suitably applied to blind children, the more profitable will be the results we shall obtain.

So, through a well drawn programme, we shall lead our pupils to the secondary schools. Here new difficulties will arise for choral singing because this is the period of the voice break. We shall therefore give priority to hearing and to acoustics. Of course we shall not insist too much on the theory, which can be essential mainly for those who will make of music their specific activity. What I feel is very important is to let students love and enjoy music so that, having accomplished their studies, they will feel the need to attend the concert-halls and, within the limits of their abilities, to practise music, because it will take their mind off their worries, it will help them to bear difficulties, tiredness, discomforts and privations, but above all the humiliation that blind people meet more often than anybody else.

The blind adult is often neglected as far as music is concerned and it is quite difficult for him to join in the collective performances of sighted people.

It is desirable that all Organisations of and for blind find the way to put together instrumental and vocal ensembles. Something on these lines has been already done in Switzerland, Great Britain, Hungary, Bulgaria and in some other countries. Their experience can be extremely helpful for all other associations which are willing to organise similar ensembles compatible with quality and number of the blind of the country. This can be a starting point and it would be wonderful if, in the future, international exchanges of these ensembles could be promoted to foster contacts among people not only in the musical and recreational field.

Another aspect socially extremely important is the inclusion of the blind person in the world surrounding him: in the school first, then within the frame of his work and also as far as leisure time is concerned.

When and where this is possible, recreational clubs, where sighted and blind could be both admitted together, would be therefore very advisable.

Music could have a prominent position and the blind person who practises it will have the chance to be appreciated, esteemed, to feel a man among men.

I do not pretend to have treated the subject fully, but I will be glad if with this paper I have given a little contribution to raise some ideas which could be useful to the future generations.

I voluntarily omitted to speak about the "conditio sine qua non" for the realisation of the above mentioned programmes, i.e., the help from the various Braille musical printing houses. Of course Braille will always be the sole irreplaceable means to reach an earnest, accurate preparation. Thanks to it music will not only be recreational but also recreative. If every blind man raises a monument to Louis Braille from the bottom of his heart, every unseeing musician dedicates to him the finest symphony that springs from his spirit.

Let us then help our youth to fill up their leisure time in the most useful and recreational way and once more let me quote Plato, who, knowing all the deepest needs of man, warns us that "music gives a soul to the Universe, wings to the human mind and life to everything and leads to beauty, goodness and truth."

In our modern society, where moral values are so often ignored and trampled, we shall do a highly meritorious work if we contribute somehow to tear the man away from materialism in the depth of which his presumption has thrown him. So doing we may hope, with Pablo Casals, that there will come a day when the Joy Song is sung by all people of the world.

DANCE AND DRAMA FOR EDUCATION AND RECREATION OF THE BLIND

By **Miss Nama K. Ajgaonkar,** *Superintendent,*
Dadar School for the Blind, India

"All life is a dance of will; the universe has its only language of gestures, it talks in the voice of pictures and dance", says Rabindranath Tagore.

Dancing is rhythmic physical movement prompted by emotions. Such rhythmic movements are spontaneous in human beings, birds and animals. The movements may be of any or all parts of the body and form an aesthetic pattern.

Records of ancient astronomical dance, inspiring a feeling of harmony of the revolutions of planets with their influence on human life, can still be found in Egypt. We know about the war dance, the funeral dance, and the savage dance. This form of dancing was meant to give vent to primitive emotions, but dancing in civilised society has become a means of recreation and instruction.

There are three essential features in a dance: (i) A spontaneous movement of muscles under the influence of some strong emotion, such as joy, anger or religious exaltation. (ii) Pleasure derived both by the dancer and spectators from the graceful rhythmic movements. (iii) Responsive evocation of emotions in the spectators.

Dancing should be taught to the blind also, because their experience of the range of movements will not be complete without learning at least some dance forms. Dancing, besides providing a new dimension of rhythm and movement, proves a source of physical and social contact. It thus offers an ideal means for artistic expression, emotional satisfaction and social integration.

The blind do not find much difficulty in following a rhythm, as they listen with great care. They can therefore appreciate the musical accompaniments of dance with better ease and understanding. The blind are less self-conscious in trying out ideas of movement. They normally have to train their memory considerably and this memory is very helpful in learning dancing. Of course, the lack of knowledge of gestures poses a problem while teaching them dancing, particularly those dances, like classical Indian dancing, which involve elaborate eye movements. The blind being not used to outgoing free movements, their movements look awkward and lack in grace. However, with intensive and patient training, they can be encouraged to make free, uninhibited movements, especially footwork, and overcome these drawbacks.

Today, you have three demonstrations (i) classical Indian dancing, (ii) folk dancing and (iii) modern dancing.

'Kathak' is a fascinating, graceful, classical dance of Northern India which, in particular, demonstrates the technique of timing. Its subtlety is achieved by the dancer, starting from unit time and coming again to that point after making a series of poses and postures of varying fractional measurements.

Here two girls are giving the demonstration. One is totally blind and the other is partially blind. You will see that both of them are capable of artistic movements and derive the same joy—the difference is that the partially seeing girl is capable of quicker movements, while the totally blind performer can do only slow movements in a graceful manner.

The classical form of dancing can be enjoyed by the blind who perform it; but as a means of recreation, not many blind would enjoy witnessing it, as being a most artistic form which evokes our emotions through facial expressions, mainly movements of the eyes, it is lost to them.

Folk dancing is for the sheer joy of the performance and not primarily for the entertainment of others. It is a spontaneous emotional rhythmic expression. The music clearly creates an atmosphere appropriate for the movement, and is normally performed in a round or square formation. There is a variety of simple movements from the waist upwards, particularly of the hands and arms. Since most of these dances form a combination of sliding and shuffling, not much footwork is involved and they are therefore easy for the blind to perform. The folk dance, normally being a social dance, can provide an opportunity to the blind of mixing with confidence with the seeing. Here is a demonstration of 'Garba, a folk dance from Gujarat.

Good posture, a springing or gliding step and free movement, can be achieved through both classical and folk dancing. Modern dancing helps to develop awareness of muscular rhythm and provides an opportunity to the blind for developing free, natural movements. The blind, with this form of dancing, can overcome their awkward movements and learn to make free movements through the interpretation of music and so, can participate in this dancing with the seeing. Here is a demonstration of modern dancing.

From ancient times, dance and drama have been providing recreation to human beings. The need for self-expression through the medium of play is the same among the blind as among the seeing.

The aim of educating the blind is to integrate them into the society of the seeing. It is therefore necessary to provide the blind with the same education as the seeing. For this they must cherish the same values in art as others. Therefore, it is necessary to present dramatics to them in the same manner. In fact, the need for self-expression is more urgent among blind children, and, therefore, dramatics should play a definite role in schools for the blind.

Blindness imposes certain physical limitations and mental inhibitions. Dramatics provide them stimuli to overcome these.

Drama is a potent method of teaching the blind poise, right posture, graceful movements and engaging gestures. Participation in dramatics helps them in overcoming (i) rigidity of body, (ii) awkward mannerisms and (iii) lack of expression. It enables them to learn pleasant manners and proper use of voice. Also, it helps to stir the blind persons′ imagination and broadens their mental horizon. It provides them with a means to give vent to their emotions.

The blind can stage plays to entertain themselves as well as others. Of course, teaching of dramatics to the blind calls for extraordinary patience and perserverence. Gestures and facial expressions do not come to them easily while they can memorise their dialogues better than the seeing. Considering the benefits, the effort is worth while, nay, it is a MUST for a complete education.

PROFESSIONAL SESSION 7 **Tuesday afternoon, October 14, 1969**

WHAT NEXT IN SCIENCE AND TECHNOLOGY

Chairman: **Dr.M. Robert Barnett,** *Executive Director, American Foundation for the Blind, U.S.A.*

REPORT OF THE COMMITTEE ON TECHNICAL APPLIANCES

By **Dr M. Robert Barnett,** *Chairman*

The committee had convened only one time in the five year interval since the conference in New York of 1964. Its meeting in the interim was at London, England a few days prior to the meeting of the Executive Committee of WCWB at Belgrade, Yugoslavia in April 1967.

The principal import of the discussions by the committee in London and Belgrade had to do with developments in the field of talking book recording. The committee made a report at Belgrade which called attention of all interested countries to the cassette apparatus offered for purchase by the British firm of Clarke-Smith, Inc., and which was at that time being increasingly adopted by the English speaking world other than the United States. The system was also being considered by many Spanish speaking countries.

The committee met again on October 7, 1969 in one of the conference rooms assigned to the WCWB group at New Delhi. Its report was made verbally at Mr. Barnett's request by Mr. John Colligan of the United Kingdom. A summary of that report follows.

The committee discussed its relationship with the World Braille Council, which during the course of the 1969 conference became a standing committee of WCWB rather than a separate body. The committee agreed that its role had to do only with questions of mechanical or electrical reproduction of braille itself, and that the World Braille Council could refer to the committee any questions concerned with production. Conversely, the WCWB committee on Technical Appliances does not feel that in itself it should be required to review proposed changes in braille notation.

Mr. Charles Hedkvist, a member of the committee, reported on his participation in a meeting in Dublin some weeks prior to the New Delhi conference—a meeting called by the International Society for the Rehabilitation of the Disabled to discuss the developing services of the International Committee on Technical Appliances. This committee's interest is concerned largely with prosthetic devices and appliances for persons with orthopedic disabilities, and does not intend to duplicate the informational service concerned with the visually impaired which is being rendered by IRIS (International Research Information Service) conducted from the address of the American Foundation for the Blind in New York City. Nevertheless, Mr. Hedkvist emphasized that there was a need to establish a liaison between the World Council and IRIS with the ICTA. It was agreed that Mr. Leslie L. Clark of New York City, Director of IRIS, would be appointed to be the liaison officer for WCWB with ICTA.

Much discussion occurred at this meeting with regard to whether a new international "catalogue" of available aids and appliances should be compiled and published. Mr. Barnett and Mr. Colligan, representing the two original sponsors of the first catalogue of 1962 (the Royal National Institute for the Blind and the American Foundation for the Blind) presented differing points of view. Experience at the RNIB offices in London was that there was such a lack of interest in an up-dated catalogue that it, meaning RNIB, was not motivated to go to the expense of a new edition. Mr. Barnett, on the other hand, said that his impression was that there was a general demand for an up-dated catalogue throughout the world, but that he did not feel that it was the responsibility of the U.S. organization to produce it. It was agreed that the question should be put before the Executive Committee of WCWB as to whether that body would be willing to make a judgment about the need of such a catalogue and to finance it.

At the request of the representatives of West Germany, the committee spoke at some length about the problem of securing exemption from patent fees for producers of appliances for use for or by the blind. It was decided that this question, regardless of its significance in providing incentive to manufacturers, was not within the scope of this committee's function.

The committee ended its discussions by re-affirming its belief that a committee on an international scale should continue to examine problems presented in the field of visual impairment which might find a solution in technology, and that such a committee should be under the auspices of the WCWB. It was generally felt that a future committee should include not only administrators of agencies for the blind which actually develop and produce aids and appliances, but also individuals whose professional training and interest is in the field of research and development itself.

The committee made no further comment about talking book apparatus. It did point out, however, that since 1967 a new system had emerged in the form of the Philips (Norelco), General Electric, and Sony cartridge machines which was attracting considerable interest in both European and American circles.

AIDS AND APPLIANCES CURRENTLY AVAILABLE OR IN THE PROCESS OF DEVELOPMENT

By **Mr. J. C. Colligan, C.B.E.,**
Director-General, The Royal National Institute for the Blind, England

It is fair to say that there are far greater opportunities open to blind people today than ever before, in Education, Employment, Vocational interests and Rehabilitation, also that no small measure of this increase in personal freedom and activity can be attributed to the development, over the years, of a wide range of aids. The blind, as a proportion of the general public subject to the very informative present day means of mass communication, are becoming increasingly aware of what Technology can achieve and are demanding more from, and contributing more to society, in proportion to the extent to which aids for work and leisure can be provided, to permit the fullest possible independence within the sighted community.

Though I am delivering this paper in my capacity as Director-General of the Royal National Institute for the Blind, I must immediately express my indebtedness to the Technical Officer of the R.N.I.B.—Mr. Cedric Garland, for having supplied virtually all the information which follows.

As you will be well aware, the R.N.I.B. has, since the International Congress on Technology and Blindness which was held in New York during 1962, been co-operating with the American Foundation for the Blind in the operation of the International Research Information Service whereby both organisations have endeavoured to accumulate a wide variety of information on specific devices, aids and appliances, as well as details of new developments and fundamental research projects.

It is a matter of some regret to us in the United Kingdom who are particularly charged with that section of the Information Catalogue dealing with prosthetic aids and appliances, that there is some evidence that details of all existing research and development in that field is not always notified to I.R.I.S. Moreover, we are disappointed at the lack of enquiries which come to us for information about current aids or developments. Whether this is due, even after some seven years of operation, to a lack of awareness on the part of some member nations of the W.C.W.B. as to the availability of this service, or merely due to a lack of interest in it, I am unable to say, but I would take this opportunity to emphasise that I.R.I.S. can only be successful if it is complete and that it can only be complete if we have the goodwill and the active participation of every individual and organisation engaged in this all important field.

Aids and devices can be readily divided into two categories, firstly the general purpose aid which is sufficiently basic in function to be applicable to wide usage among the blind population, secondly the special purpose device, tailor made to meet a limited demand by a small number of people or a specific need by an individual. The greater percentage of currently available aids falls in the first category and is comprised of both long established aids such as Canes and personal braille writing equipment, produced in many countries, with which most of us are presumably familiar; the lesser percentage is of the more recently produced aid such as the British Rain Warning Device for the housewife, the American Foundation Electric Metronome for musicians and the Marburg Clockwork Switching Timer for switching on low power domestic electric appliances.

A complete listing of available aids is not possible because new developments are not always circularised or communicated to the International Research Information Service. Further examples of aids of which we are aware are however as follows:—

The Swiss Central Union is making available, to special order, an electrified version of the Perkins Brailler at a cost of about twice that of the manual machine and in Tokyo the Maekawa Company are listing school devices for measuring linear expansion, an Optical Bench and an Electroscope, based on designs by Mr. A. Wexler. The R.N.I.B. has now available an Electric Alarm Clock, a smaller Electronic Playball of 5″ diameter weighing 12 ozs, an increase in the range of physical and political plastic maps to include Africa, Asia, England and Wales with North America to follow, also a Geometry Set of drawing instruments for use with paper-backed Melinex sheeting which in addition to raised line drawing can be embossed with braille. The American Printing House has introduced two versions of an Audible Goal Locator, one mains operated and one battery operated, as a noise generator for use in ball games. A Friction Pads Kit consisting of self-adhesive foam pads for fixing to items to prevent them sliding about, and a device called the Swail Dot Inverter for the upward embossing of dots in paper or plastic sheeting. The C.N.I.B. has produced a new version of the game of Bingo and a number of plastic injection moulded braille Pocket Frames are available from The American Printing House, The Lighthouse Welfare Center in Osaka and Allgemeiner Deutscher Blinden Verband in East Berlin. The American Foundation are also listing an Electronic Level and an Electronic Compass, both items having audible outputs. The RNIB Audible Sound Beacon is proving of benefit as a variable source of sound for which there are many applications, it has been successfully used in the game of bowls, as a target for Javelin throwing and straight running races in schools, also for general location of say tools on a bench or in the garden. Similarly the Audible Photoconductive Light Probe is a versatile device for converting light intensity into sound frequency, it can be used for detecting the level of liquid in a container such as milk in a baby's bottle (or whisky in a glass!), the location of a printed letter heading by a blind typist, or merely to establish whether the lights are on in a room or the whereabouts of windows. These items indicate the wide range of functions for which aids can be developed.

In the more restricted field of limited quantity or special individual aid, we can refer to the Swedish Medicine Ball, the American I.B.M. Electric Braille Typewriter and the British Doorbell and Communication Device for the deaf-blind, also the Alarm Clock for the deaf-blind. My familiarity with British equipment leads me to mention some special educational aids developed by the RNIB and shortly to be manufactured, to assist the blind student undertaking more advanced studies in Science. These are the Audible Chemical Balance used to a weighing accuracy of one tenth of a gram, the Audible Thermometer with a range from minus ten to plus one hundred and ten degrees Centigrade, with an accuracy of one per cent of full scale, also the Digital Timer reading in braille to one tenth of a second, for experimental work in Mathematics and Physics. There is also the Multiple Head Embossing Set to enable the teacher to create more tactually versatile embossed drawings to meet the need of these more advanced subjects as well as being beneficial for more elementary work.

In the light engineering industry, an audibly indicating Dial Gauge is now in use, incorporating coloured light indicators for the partially sighted; it can be used by the blind Inspector with facility, to a tolerance of one half thousandth of an inch and with suitable mounting to one ten thousandth of an inch. Recent tests with this instrument together with a special Height Gauge, suggests that a blind person can undertake tool setting on automatic Capstan Lathes with a facility equal to his sighted counterpart, provided that information normally supplied on drawings, can be recorded on magnetic tape.

Within the term 'Appliance' one might include the development of Automatic Card Operated Transcribing machines, now in use for braille production at the American Printing House and at the RNIB enabling a full grade II braille to be produced by non-braillists using a computer. This is an excellent example of international co-operation where we in England, taking advantage of many years of American research, were able to write new programmes for a different computer and to create an operational plant within two years, despite the fact that two different systems are used, the 360 in America and the 1,130 in England, and even though we use Solid Dot Braille whereas it is Embossed

Braille in America, the output from each is interchangeable so that we could process each other's braille if the need arose. While on the subject of transcribing machines, two new manufacturers have begun to produce these, The Batic Company in Nice, France, and the Büro fur Allgemeiner Tächnik in Wien, Austria. Then for production there is the Timpson Rotary Press made in London for about £5,000.

Falling well within the subject of 'Aids and Appliances' is the facility available to blind people to have commercially produced domestic equipment adapted for touch reading. At the RNIB we have an Engineering workshop carrying out the braille adaptation of Electric Cooker controls, Toasters, Kitchen Scales, Electric Irons, Automatic Time Switches and Central Heating Controllers, etc. Many thousands of these and other such controls are adapted every year and this service is clearly of value and much in demand.

With regard to aids and appliances under development, here one can refer only to such work as has come to our notice:—

In England there are a number of Industrial Aids under investigation, prototypes having been constructed of a 6″ Caliper Gauge and a servo-assisted Height Gauge with a direct digital braille read-out. A prototype 12″ Geographical Globe is being made with a view of producing these in plastic at a cost less than one pound sterling so that every blind child in school can have one. A braille Crossword Puzzle Set is soon to be in manufacture for purchase at the end of this year. In America and in many other countries work continues towards the ultimate goal of making braille as accessible as print, and indeed to making print accessible to the blind by means other than braille; such work is however too extensive to discuss within the scope of this paper. In Sweden experiments are in hand to develop a Sound Beacon which can be remotely switched on by a high frequency radio signal, for use as a homing device; this presumably would be a longer range unit than the ultrasonic device developed in the U.S.A. by Science for the Blind, using a dog whistle as the ultrasonic switching source. Also under trial in Sweden, in prototype form, is a finger vibrator for use by the deaf-blind as an end-of-line signal on braille writers, a visual light indicating Height Gauge and a classroom unit to enable the blind teacher in a school to know when a pupil is requiring assistance.

Another example of international co-operation is the British Talking Book, using a cassette weighing only 6½ ozs. but with a 13 hour playback time. This is now being exported to a number of countries wishing to take full advantage of our many years of experience in the use of such machines by the blind.

It will perhaps have been noticed, by those of us familiar with the development of aids through the years, that whereas most devices in the past were of a mechanical nature, we are now seeing the more frequent application of electronics which has permitted the miniaturisation of those circuits particularly applicable to aids for the blind, such as the construction of tiny audible units requiring very little power for their operation; this in turn enables the designer to take full advantage of the two senses, touch and hearing, within which he must invariably confine his activity.

Although we might say that the future, as far as the development of new aids is concerned, will be directly influenced by advances in the many Scientific and Technological disciplines, much will still depend upon the ingenuity of the researcher in applying these disciplines in an effective way and, what is sometimes more difficult, to fully understand the problem for which a solution is to be sought.

For the forseeable future therefore, one can anticipate an increasing use of the computer as an aid to the establishment of design parameters, as well as a widening in their use for the production of braille and for direct communication between terminal on-line embossing and audio equipment. In the field of Mobility an increasing effort might be expected to investigate the usefulness of a large number of widely differing aids, which may break through the barrier of the unknown requirements for good non-visual orientation and safe pedestrian motion. An increasing interest among Scientists and Engineers in the field of Bio-Medical-Engineering, might be expected to focus their attention more directly towards the handicap of blindness and the synthesis of a rudimentary form of sight would not seem impossible before many years have passed.

As I said earlier, I am conscious that there are probably many developments which I have been unable to mention in the course of this paper for the simple reason that we are in all probability unaware of them. If the subsequent discussion brings to light the existence of further aids and appliances or even that of some hitherto unknown current research, then this can only add to the sum of our total knowledge of this all important question.

If, as a result of anything that is said, or done at this Session, it extends in the future the range of information available and ensures a greater and more profitable use of the existing machinery for the exchange of knowledge, then we shall have made a further contribution to the progress of this supremely important influence on the lives of the world's blind.

Whatever the future may bring, one can safely assume that the degree of progress in the development of useful aids and devices, will be in proportion to the amount of effort being applied to that development and here all nations can help, not in isolation, but as part of an internationally co-ordinated team with one objective—to help the blind.

RESEARCH TRENDS IN NON-VISUAL PERCEPTION, READING, MOBILITY AND ARTIFICIAL VISION

By **Mr. Leslie L. Clark,**
International Research Information Service,
American Foundation for the Blind, U.S.A.

In his Meditations (IV, 45), Marcus Aurelius reminds us that "...that which comes ever after conforms to that which has gone before." So it has been with sensory aids during the last decade of research and development. It is doubly true in the case of the present paper; not only has its Appendix been distributed in advance, but most recent work is intelligible only in terms of the recent past. Finally, it is true of the future. I shall not indulge in the tempting pastime of looking decades hence for the situation of the blind vis a vis advances in the state of the technical arts. I shall take a much more modest view, namely that if one holds constant the situation now prevailing in research and development, one can guess what developments are likely to take place during the next five-year period. There is a rather large number of demurrers and assumptions in holding constant the current situation, on some of which I shall comment later.

One of the reasons we can now be so conscious of the past, and of the potentialities of the future, or at least the near future, is that quite recently we have become radically time-binding in the field of research in the problems of blindness. One need only point to my own office—the International Research Information Service—and recall that it was established in 1963, to realize how recently this time-binding has become institutionalized. The purpose, of course, is to avoid the waste of needless duplication; and hopefully to help consolidate the knowledge of work currently under way in research in many of the countries of the world. It is by now common knowledge that the reason why so many past technological innovations have not resulted in viable aids for the blind is that researchers have had the tendency to develop technically elegant solutions to non-existent problems of blind readers, travellers, workers, students, and professional people. A curb detector utilizing a modified proximity fuze device may satisfy the desire of a technologist to incorporate a military development into a product useful and constructive to man; but if it requires that the cane in which it is fitted be kept a rigid four inches from the terrain, the usefulness of the cane itself to the blind traveller evaporates. (My example is not fictional). Nor are the problems in translating what is useful in basic scientific knowledge into useful technology always immediately soluble. Consider the situation faced by researchers at the Massachusetts Institute of Technology (MIT) during the period 1943-1945, who developed one of the first speech recognition devices. The machine they built invariably detected the word "butterfat" whenever it occurred in the stream of speech but, as Oliver G. Selfridge (Lincoln Laboratories, MIT) noted with a certain dry humour, they found that the term "butterfat", did not occur very often in normal conversation.

In the next few pages I will attempt to sketch the direction of some recent work in non-visual information processing, and indicate the implications for making possible direct access to the printed word, and the ability of an individual to orient himself and to navigate in his surroundings; or, more generally, to cope with his environment. These are, and remain, the most pressing problems resulting from blindness. This is not to say that solving them will solve the problems of blindness—the condition of blindness is too profoundly disabling to be solved that easily; that is, the limitation on normal activity of the individual is pervasive. But reading and mobility on an independent basis seem to be the most immediate needs of many blind persons, as pre-requisites for best possible rehabilitation. Were the proceedings of three recently-held meetings already available, my task would be even easier. Earlier this year, conferences were held in Menlo Park, California, on tactile displays [1] ; in Chicago, Illinois, on the possibilities for visual prostheses [2] ; and in Paris on the functions of gaze and optimization of remaining vision [3]. Were these, and two recent papers on a binaural mobility aid [4] before you, our conjoint references to the literature could be more complete. Since this is not the case, however, let me comment briefly on the probable consequences for aids in the near future on the basis of what we now know.

Mobility

During the next five-year period, we are likely to have on hand the following devices and systems in the evaluation stage:

1. The Vision Substitution System of Bach-y-Rita and his colleagues (a similar system has been proposed by Diaz Gandia and his colleagues in Puerto Rico).[5]
2. Two versions of direct cortical stimulation systems; one in the U. K. by Brindley and his associates, one in the U. S. A. by Vaughan and Schimmel and their associates.[6]
3. The Binaural Spectacles ultrasonic mobility aid of Kay and his colleagues at Christchurch, New Zealand.[7]
4. The 60=Channel Elektroftalm of Starkiewicz and Kuprianowicz of Poland.[8]
5. A head-mounted version of the Kay single channel

mobility aid.[9]

6. The passive optical aid of Bliss of the Stanford Research Institute (SRI), in the U. S. A.[10]
7. The Russell Path Sounder of Lindsay Russell, consulting engineer of Cambridge, Massachusetts.[11]

Most of these systems have been described already in the literature, and the interested reader may refer to the original sources for further details on them. Note that all of these except the Russell Path Sounder utilize extensively the kinaesthetic information provided by the movements of the body to aid in orienting the user in space. Note also that three of these systems —those of Bach-y-Rita, Kuprianowicz, and the two cortical implanted devices—are designed as general solutions to vision substitution, i.e., will provide some mobility data, and also some data for reading.

The Vision Substitution System has proved, in its laboratory version, to have some rather remarkable properties, among them the allowing of rapid learning of spatial and depth cues, and the rapid assimilation of cues to highly individual patterned representations, like those of individual faces. Whether this will remain so in the portable version, used in real time and outside the laboratory, we will see; but there is good reason to expect that similar effects will be noted. We have learned with this system the overwhelming importance of "emergent capability" of the nervous system to deal with complex patterned information when this is presented to nervous structures, like the organ of skin, having highly developed ability to handle complex data. It will be interesting to see whether these same capabilities will be engaged using only the skin of the forehead, in the Polish version. In either case, the importance of the Kinaesthetic feedback (and "feed-forward") from the musculature of the supporting structures of the head looms very large. We are just now beginning to understand the relevance of the internal motor programming built up in the training of the visual and other sensory systems that has been pointed out to us in the work of Held, Kohler, and others (3). In any case, the almost automatic engagement of kinaesthetic cues with head-mounted devices has assumed a new importance for designers of mobility aids.

The Kay Binaural Spectacles seems to represent a significant increment in information processing for the user of ultrasonic mobility aids. The device utilizes internal motor programming inherently, since it is incorporated into spectacle frames. In addition, the binaural information seems to provide a significant increase in the information which can be used in real time navigation by the user.

The matter of a direct cortical implant, to provide a visual prosthesis, has long been a special preserve of those who dreamed of a general solution to the problem of blindness. In the Appendix to this paper, I have given a rather gloomy view of the prospects for this solution. Recent developments have not given us reason to alter that picture, in spite of the spectacular scientific achievement represented by the work reported so far. The next five-year period will undoubtedly see further experimentation in this area, including additional transplants and a better understanding of how it will operate; but we should not expect anything like a remote resemblance to routine in cortical implantation. Several important facts have now been established about cortical stimulation in Brindley's experiments, among them the following:

1. A screen of phosphenes can be created by stimulation of an implanted array of electrodes;
2. Phosphenes can be maintained and stabilized spatially;
3. The threshold for stimulation remains fairly constant;
4. Simple patterns can be elicited from the stimulation; this is of crucial importance for a visual prosthesis;
5. An apparent connection between phosphene points can be generated if they are stimulated concurrently;
6. Differences in apparent brightness are related directly to differences in frequency of stimulation;
7. The surgical risk involved in implantation is small;
8. A visual prosthesis is a feasible idea to entertain;
9. Some pre-processing of the image conveyed by the implant may be required;
10. About 1000 to 4000 points of stimulation would be required to make up a minimum field corresponding to normal vision.

It should be said, furthermore, that in spite of the taboos against opening the skull of humans and against stimulating the brain with external signals, these experiments *will* be done with all due precautions; of that there is no question. Nor is there any question but that those now involved in these experiments are responsible investigators. But it is important to remember that these are early experiments, not steps in a research and development programme for "artificial vision"; the investigators are concerned rather with feeding input into an organ already specialized for spatio-temporal perception, i.e., the visual cortex. Non-specialists are particularly prone to the "iconic fallacy," of establishing normal visual experience as the criterion of performance for visual prosthetic systems, rather than adhering to the broader, though less dramatic, criterion of effective functioning of the blind individual.[12]

What is most interesting about these several aids is that they do not, in general, overlap in the sub-populations of the blind to which they are most applicable. That is, the persons most suited for a cortical implant are not likely to be those for whom the Vision Substitution System is most applicable; and neither of these persons is likely to be the one for whom the ultrasonic spectacles are most suited. The reasons for this fact are several and complex, some having to do with the selection of subjects for experiments by the researcher, some having to do with self-selection by potential users of what systems they are most likely to feel comfortable with. But the consequence is interesting: it is that it is impossible to select one or two of these systems as the "ideal" solution to mobility. Here is another illustration of the argument that the field of sensory aids requires an array of aids from which individuals can choose, according to their requirements and their capabilities, to extend their appreciation of the world directly. Unless further evaluation shows one or more of the proposed systems to have fatal flaws, there is no reason why all of these efforts should not be supported equally, from whatever sources may be found, and thus provide us with a series of options for enhancing direct interaction with the environment.

No mention here has been made of the use of patterned phosphene generation, using electrical stimulation of the trigeminal nerve in the face. The difficulty of obtaining reliable stimulation in this way, without exceeding the power factor of the skin, and the difficulty of obtaining reliable patterning, have discouraged researchers. I do not expect that this line of investigation will be pursued as vigorously as those already mentioned.[13]

Reading

I am including under this rubric a number of developments which promise, during the next five years, to bear useful results. All are being pursued as vigorously as the mobility projects mentioned in the previous section. My colleague, Mr. Swail of the National Research Council of Canada, has mentioned some of these already in his paper under the rubric of "communication." The projects I shall mention include those which (a) enhance the availability of braille, (b) permit direct access to the printed page, and (c) explore the potentialities of compressed speech. I shall mention also some communication systems now in prototype stage which are likely to become widespread in the near future; and I shall mention some matters intimately involved with the topic of communication and its relation to the theory of non-visual information processing.

Reading: enhancing the availability of braille

With the recent publication of the Nolan and Kederis study of braille reading as a cognitive process, and of a study of braille teaching methods, some bases have been established for the understanding of specialists and non-specialists alike of the special problems of learning braille.[14] For some time now, technologists have worked under the presumption that if braille were more widely available, and more topical in the availability of source materials in this code, it would be more widely used. There has also been considerable interest over the world in automatic transcribing of braille, in part because of the gradual decline in the number of skilled transcribers available, and in part because it is felt that the talents of such people should be devoted to more than the routine prose transcribing in which they are usually engaged. There is little doubt that in the area in which machines excel, namely the repetition of tasks by rule, computer-based systems of braille transcribing have proven useful; and we can expect increasing utilization of such systems in the U.S.A. in the U.K., in Scandinavia, in Germany, and in some other technologically advanced nations. The emphasis will probably shift toward using skilled transcribers for the more creative tasks of transcribing musical and mathematical notation, and to solving the problems of adequately conveying the content of diagrams and plates, with a consequent rise in the level of professional competence and social status associated with the profession.

The implications of devices like the IBM Braille Typewriter and the Thermoform process have already been mentioned by Mr. Swail, and are more fully developed in the Appendix, so I shall not dwell on these here; except that I would note that aside from the MIT Brailler (see Appendix), we still have no method for very fast generation of simultaneous ink print and braille records. This problem is likely to engage the interest of some inventive researchers in the near future—particularly if the use of braille increases with its wider availability.

The problem of compacting braille information for storage will enjoy a similar renaissance. Of the systems often mentioned in the past for storing the braille code in an auditory analogue, like the system proposed by Strauss and others in the U. S., two have now come to the prototype stage, and are likely to enjoy wide attention: the Autobraille system of Ward, and braille reading machine of Grunwald of Argonne Laboratories.[15] Both systems employ magnetic tape as the storage medium, and a tactile display of the lines of braille text as an output. Note that further development of these systems depends on reaction from both researchers and potential users.

Bringing the information to the user and enhancing his motivation to use the information is also the feature of the computer-based real-time processing of ink print into braille in a school system.[16]

It would seem that in the next few years we shall have ample technology at our disposal in these projects to test the basic hypothesis of usage vs. availability; and hopefully to decide on the appropriate mix or balance of immediately available and deferred available texts for use by students and professional blind persons.

Reading: Access to the Printed Page

A description of the several systems now under development which permit direct access to the printed page by the user will be found in the Appendix to this paper.[17] We can expect that in the next few years a number of these systems will be evaluated by users, if only in controlled laboratory situations (i.e., before production prototypes become available).* Here, again, we expect some resolution of an ancient controversy. When reading machines of the optophone type were first developed, they were envisaged as general solutions to the problem of direct access to the ink print page. Subsequent events have shown that reading speeds attainable with "personal" reading aids rarely reach levels comparable with the rates of sighted readers, readers of braille, or users of talking books; and at least one researcher has given us some understanding of why this is necessarily so.[18] It is now thought that personal reading aids can serve for short-term reading tasks (of cheques, labels on tins, personal letters, and the like). Some recent systems, however, like those of Beddoes and of Bliss/Linville, allow reading speeds in the range of 50 words per minute. It will be interesting to see to what extent these are used after the first flush of novelty recedes in the user's experience.

It is in the realm of computer-aided communication systems, involving the printed page or its analogues, that we can expect some of the most dramatic developments in the next few years. Kenneth Ingham of the Research Laboratory of Electronics of MIT has already demonstrated a synthetic speech output for an information retrieval system specifically oriented toward the needs of blind persons and rehabilitation specialists in the field of work for the blind.** And an experiment is now under way to test the feasibility of using a scanning head of the "personal aid" reading machine type to scan ink print, send the output signals over telephone lines to a central computer for analysis, and generate a speech output fed back over telephone lines to the user. These systems come close to a long-held hope of many professional blind persons in allowing them access without human intervention to ink print texts in their own fields of work, when and as they need the information contained in the texts. It will be interesting to see to what extent the systems will be used, and how great is the need for immediate provision of information.

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* The octical-to-tactile system of Bliss and Linville may soon be available in serial production form.

**A tape-recorded example of the speech-like output of the retrieval system was demonstrated at the Second Visual Prosthesis Conference in Chicago on the 3rd of June 1969.

The use of the computer implies that the output of scanning heads is transformed into electrical signals representing machine-readable language. This fact makes it possible to consider the use of the computer to read, store, and manipulate other machine-readable codes equally well. That is in fact the intent of a current project under the joint auspices of the Howe Press and the MITRE Corporation in Massachusetts: the storage of punched paper tape—compositor's tape-used in the printing industry for type-casting ink print books. A simple computer programme allows the transfer of the information on to computer magnetic tape for storage and for read-out into the computer. With appropriate instructions to the computer, the text can be manipulated in any way the operator desires, including searching the text for data, editing the contents for special purposes, and for the conduct of information-retrieval experiments. It is expected that within a decade the U. S printing industry will abandon the use of punched paper tapes in favour of direct magnetic tape for typesetter's and compositor's use, so the project has a finite existence. The stored text will serve as a data bank for experiments in information retrieval that may lead to extensions to the system already designed by Dr. Ingham, at first for the use of blind persons; perhaps later for innovations of use to the sighted as well.

Reading: Speech Compression

Interested readers will find information on the several methods of speech compression in the Appendix to this paper. To that information I should like to add the fact that the harmonic compressor development, in prototype form, has been completed at the American Foundation for the Blind (AFB). We have prepared a demonstration tape illustrating the compression behaviour of the several systems available including the harmonic compressor. A surprising fact about the AFB device is that its distortion is very low, and the speech is in consequence very intelligible; whether its fixed compression ratio of 2:1 will prove a disadvantage remains to be seen. I think it not likely that speech compression will, in the next few years, fulfil all of the overly-bright prospects envisaged for the technique on the part of some early enthusiasts; but moderate rates of compression do make the talking book, for example, comparable to the reading speeds of sighted readers (and do not seem to require special training). This, and the likelihood that we will learn more about what it means to learn by listening, seem to be main prospects in this area of research. It is also likely that within five years there will be a number of systems for speech compression in prototype form, permitting evaluations on a comparative basis of them all. A forthcoming conference, the second in a series, on speech compression, will be held in

Louisville, Kentucky, under the chairmanship of Dr Emerson Foulke, the director of the Center for Rate Controlled Recordings of the University of Louisville.

The resolution of sensory aids

As a sobering antidote to those who believe that the foregoing examples of the technological art will soon eliminate the problems of mobility and reading, I would suggest the exercise of calculation of an interesting figure of merit for the resolution of proposed aids proffered by Dr. Bliss of the Stanford Research Institute. If we equate 20/20 vision as being analogous to a spatial resolution capability of 60 cycles per degree of field—a generally agreed figure—then the following expression will give the resolution in ordinary visual acuity terms of any proposed device:

$$\frac{20}{2400} \cdot \frac{\theta}{N}$$

where θ is the field of view of the device, and N the number of lines which the device utilizes (20/20 is the normal acuity figure used in the U.S.A.). In the Bliss/Linville reading aid, the angle of view is about half a degree, and there are 24 rows or lines in the display. With this device, then, and within the very small field of a character space of ink print text, the resolution is something like 20/50 visual acuity. With other reading aids, having fewer lines—eight or nine lines is common—the acuity equivalent is something like 20/150 over the same half-degree field of view.

For mobility aids, the resolution is degraded accordingly as the field of view increases. The Bliss passive mobility aid has a 20 by 6000 acuity; and the Vision Substitution System may vary, depending on the zoom lens used, between 20/360 to 20/1200.

It is small wonder that considerable learning is required with any of the sensory aids for reading or mobility so far considered. In view of the patent inadequacies even of our state of the art in bringing our technological knowledge to bear on the problems of mobility and reading, the creation of basic information on non-visual systems becomes ever more important. It is encouraging to note that there are two centres where this basic knowledge is being pursued in highly ingenious experimentation. The first is the newly-established Nonvisual Perception Systems Laboratory, at the University of Louisville, under Dr. Emerson Foulke; the second is the programme of research into mobility at Nottingham University, in the U. K., under Dr. J. A. Leonard. I have elsewhere mentioned the need for development of a theory of mobility that would help guide us toward the point at which we could specify more precisely what it would be that we would wish our mobility aids to do.[19] The reaction from some blind persons is that we should concentrate, rather, on the practical needs for mobility. I could counter this feeling in words no better than Dr. Leonard who, in a private communication on a related matter put it this way:

"We accept by now that each one of us has his own language system and that in the last analysis concepts, images, cognitive maps, call them what you like, are our very own and cannot be fully penetrated by another person. Around each word which we use in everyday language there is a sort of distribution of possible meanings centered on our very own meaning. For most purposes, however, there is *either* sufficient overlap of meaning for people to be able to communicate reasonably well, *or* else most of us are schooled in making allowance for the existence of that distribution in the minds of the other person we are talking to because we ourselves have experienced that distribution within ourselves. Now I suspect that the congenitally blind have far less practice in building up or using this degree of flexibility because it is much harder for them to perceive a wide enough range of examples of any given class of object. And because of this, as well as the fact that it is damnably hard for them to acquire new information, I suspect that their language system is more idiosyncratic, more rigid, and less available to intercommunication. It is therefore jolly hard for them to instruct each other and for us to instruct them, other than by allowing them to have direct experience and saying yea or nay at the right moment. It is also very hard for them to obtain adequate feedback about omissions. One of the most extraordinary things about blind education is that few if any sighted teachers seem to have grasped the incredibly important role they, as sighted people, have to play as providers of augmented feedback."

The future of technological advances

If the tenor of my remarks in the preceding has occasionally had a rather tentative, mildly negative tone, it is because I think there are some factors operating in this arena of the delivery of technology to the field of work for the blind not generally recognized. Or, if the difficulties are recognized, they are cast so often in terms of the special interests of users or administrators that I think some of the real sources of difficulty tend to be overlooked. While there is no doubt that there is a tremendous potential in the application of technological advances in solving the problems of the blind and severely visually impaired, there is a real danger also that persons who do not understand the factors constraining that application will come to expect too much, on the one hand and not to appreciate the real advances, on the other. No doubt all this seems a bit mysterious. Let me try to explain what I mean.

In the argument pursued in the Appendix* to this paper, I have directed some remarks to educators which, I hoped, would limn some of the reasons why the transfer of technology to the field of education is beset with many difficulties. Among the reasons I cited for the difficulties were that researchers—by which I meant technologists—and practitioners—by which I meant, there, educators—operated in different domains, with different vocabularies, different rules of conduct, different levels of abstraction, and differing resources—in other words, in different environments.

The consequences of these differences, if we developed them fully, would take us rather far afield from the immediate purpose of this meeting—which in general has the purpose of celebrating the role of science. In the most general sense, technology is a tool, a powerful tool, for bringing the rewards of scientific knowledge to the field of practical applications. Its demand for precise knowledge of user populations will force us to develop better knowledge of the demographic characteristics of the blind population (indeed, it has at least indirectly done so in the U. K., the U. S. A., and Sweden). In the insistence on solutions of general applicability, technology tends toward the most general applicability of new techniques, so that advances applied to the specific problems of mobility or reading of the blind have facets of general applicability to data handling problems found for the sighted population as well. Consider the information retrieval system developed by Dr. Ingham which I mentioned above, and the remote processing of ink print information in a centrally located time-shared computer for the blind reader; both projects will develop techniques applicable to the sighted in one way or another. In this respect, technology in the service of the blind will enrich the world of the sighted just as it has in the past, in the development of the typewriter, the ball point pen, the long-playing record, and in numerous other instances—the reciprocity between both problem areas is mutually enriching.

Yet there is a danger in too heavy a reliance on technology to solve these problems. There is a danger that we will concentrate on technology to the exclusion of basic scientific knowledge: on applications rather than the generation of new knowledge; and there is a danger that the requirement of technology for general applicability may dilute the requirement for adaptation to the individual differences among users that is essential to their optimum functioning.

Perhaps the source of some of these dangers is to be found in the universal application of cost/effectiveness models, again inherent in the application of technology. With restricted monies, one must aim for the widest possible applicability for a given cost. What technology does not consider, except peripherally, is that models incorporating the balance of cost against alternative values, and of values against alternative benefits, are an inherent part of the development of service delivery systems in the several fields of rehabilitation.

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* The Appendix referred to, has not been included in these proceedings for want of space. Copies can be obtained from the author on request.

For those interested, this problem is considered briefly, in relation to the population of the aged blind, in the proceedings of a conference on blindness and aging [20], and in the proceedings of a conference on tests and measurements which has just appeared.[21] I can illustrate the problems involved—time does not permit more than this—by asking the question: should one invest more heavily in a programme to rehabilitate the aged blind (who have a brief life expectancy after rehabilitation), or in a programme for the young, when—and this is the significant variable involved—we wish to promote the fullest functioning of the capabilities of the human being for whom we are providing services? This may seem at first like a question with which a researcher has no business dealing; it is "purely" a question for the practitioner and the administrator. Unfortunately, however, it is upon the answers to questions like these that decisions about what investment we make in what technology will be made. Experience has shown that in general the answers are often made by technologists precisely in terms of those cost/effectiveness models which may, depending on one's proposed goals, deflect the delivery of technology from those sub-populations of persons who one wishes to help. Moreover, the deflection may go unnoticed because the decision is made by that elite among the technological community most skilled in making decisions about the transfer of technology. It is here that the relevance of the "iconic fallacy" mentioned above comes to us vividly.*

While it may appear in this abbreviated statement of the problems involved that a researcher is engaging in the delightful exercise of heresy against the very institutions that support his role, I assure you that this is not my intent. I am, in fact, warning of dangers that may exist, at some times and in some places, if we deliberately ignore the humanistic and, let us say it bluntly, social and political, judgments which we must make again and again, each day of our working lives. It is the dangers of uncontrolled enthusiasm for only partial and premature answers to the most profound problems of blindness that I am cautioning against. And it is particularly the danger of depending on the translation of the knowledge we have in technology to solve these problems, rather than depending on the enrichment of

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*Readers who are interested in pursuing this matter further are referred to the fascinating paper by McDermott, John, "Technology : The Opiate of the Intellectual." *New York Review of Books*, Vol. XIII, No. 2 (31 July 1969), pp. 25-35.

the *scientific* knowledge of the *nature* of these problems, that I am talking about.

One of the advantages of scientific endeavours is that, since they are rational, trends of development can be forseen in broad detail as rational consequences of present work. The value choices about which I have been speaking are ones which we still have to make in the future. The dangers I have pointed out do not require, nor do they suggest, any curtailment of present levels of involvement. On the contrary, current indications are that a more extensive support is necessary and desirable. For one thing, unless a minimum level of support is found, no realistic test of usefulness can be made nor can a continuity of research effort be assured.[22] For another, there has been the encouraging trend of increase in both our basic and our applied knowledge in technological research and development—as exemplified in the work of the Stanford Research Institute. And, as Ithiel de Sola Pool has pointed out, only nations capable of investing 0.4 per cent of their gross national product in basic science, and a sum five times that (it is suspected) in applications of basic scientific knowledge, can hope to support the research and development process in full.

If, as some commentators claim, we have now entered the second phase of the industrial age, we have also entered upon an age in which the most profound changes will be made in our lives by the intervention of technology; and it is simultaneously an age in which we shall have to insist on the most careful and most thoughtful dialogue between human values and technological values. With understanding of the needs and choices of men, and of the potentialities for altering our control of the environment in technology, we will be prepared to enrich the life potential of blind and sighted persons maximally. If we relinquish the opportunity to engage in the optimum transfer of our scientific knowledge to enrich the lives of blind persons, we will find they are likely to be more, rather than less, isolated from the world of their sighted peers.

There is a challenge before us which is filled with the excitement of discovery and the joy of creating new lives filled with the richness of the world around us. It merits, I think, the effort to make the response most appropriate to the challenge, and to realize the promise. In this, too, I think, the field of work for the blind can lead not follow in creating a model for society.

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PROFESSIONAL SESSION 8 **Wednesday morning, October 15, 1969**

MUTUAL ASSISTANCE IN THE NEXT FIVE YEARS

Chairman: **Mr Boris V. Zimin,** *Chairman, The All-Russian Society for the Blind, U.S.S.R.*

STATEMENT BY MR U. H. KREUGER—UNITED NATIONS and UNICEF

Mr Chairman, ladies and gentlemen:

I have the honour to address you today on behalf of the Secretary General of the United Nations and the Executive Director of UNICEF. I first of all place on record the great significance ascribed to the work carried out by the World Council for the Welfare of the Blind since its inception in 1950, as well as for all the work done by the associations affiliated to it who have contributed in a vast measure to the prevention of blindness and the rehabilitation of the blind.

The United Nations have at all times been greatly concerned over the situation of the disabled, and particularly that of the blind. Already in December 1946, the General Assembly of the United Nations adopted a resolution concerning the establishment of a programme for advisory social welfare services, which included rehabilitation of the handicapped as a distinct area in which technical assistance should be made available to governments. Assistance in the form of expert advice, fellowships and technical equipment was provided already from the following year.

Subsequently the United Nations Economic and Social Council approved a co-ordinated international programme to assist governments at their request to develop adequate services for the prevention of disability and rehabilitation of handicapped persons, including their education. Through the years this has developed into a comprehensive programme with an emphasis on rendering technical assistance to developing countries in Asia, the Middle East, Africa and Latin America.

All action in favour of the blind is within the United Nations a well co-ordinated programme. Guidance on policy is provided by the Commission for Social Development of the Economic and Social Council. United Nations action in this field is the responsibility of the Rehabilitation Section of the Social Development Division which forms part of the United Nations

Secretariat. A close working relationship exists between the United Nations itself, the technical assistance programmes, the Specialised Agencies, UNICEF and several international non-government organisations. It is worth noting that the scope and complex nature of this subject extends into the fields of several United Nations Specialised Agencies such as ILO, UNESCO and WHO.

As part of the general action described above, there is on record a long standing, close link between the United Nations and the World Council for the Welfare of the Blind, which has been manifested in a number of concrete steps taken by them jointly or separately.

The Economic and Social Council has recommended to the Specialised Agencies concerned that every effort be made to provide member governments, at their request, with help and advice in the field of social rehabilitation of the blind. The Economic and Social Council has also recommended that member governments should continue their efforts in the field of social rehabilitation of the blind, and in instances where they have not yet done so, to establish appropriate government bodies or encourage voluntary organisations to take a lead in studying and solving the problems confronting the blind. The necessity for appropriate legislation is considered an important factor in helping the blind to resolve the special problems with which they are faced.

In working towards the goal of promoting the maximum well-being and productivity of their people, the developing countries are placing increasing emphasis on the initiation and expansion of their health programmes. As they become aware of the importance of preventive health work and of the progress in modern medicine and surgery as well as in rehabilitation procedures, they concentrate their major efforts on mass measures and on basic health services with the objective of reducing the incidence of physical disabilities among the population. Priority is still by and large given to measures that can be applied widely so as to avoid a disproportionate drain on a country's financial and professional resources. However, no society dedicated to the advancement of social well-being, which must be based on the recognition of the dignity and worth of each individual, can afford to ignore its handicapped. In many parts of the world it has been demonstrated that, given the opportunity to benefit from the complex of rehabilitation services—medical, psychological, social and vocational—handicapped persons can successfully participate in the productive life of their community. Therefore any programme designed to advance the knowledge of treatment and rehabilitation methods and to provide for both specialists and non-specialists engaged in such primary services as health, education and social welfare, should be comprehensive in scope so as to include the various categories of disability.

A fundamental aspect of any rehabilitation programme is public education towards effecting a change of attitudes toward the handicapped person. It has become important to recognise the overall problem of arousing a public awareness of the negative effects of alienating the disabled from the general social stream, and the necessity to educate and train the disabled themselves to function productively within the limitations of their particular disability.

The problem of the blind exists in all countries. It is however natural that the attention today focuses on the situation of the blind in developing countries where the problem is not only much larger quantitatively, in the sense that approximately 80% of the blind live in economically less developed areas of the world, but this is also the part of the world where welfare services for the blind, due to a lack of resources, both technical and financial, have lagged far behind modern developments.

It has been extremely gratifying to note the deep involvement of this Council in the situation of the rural blind as the vast majority of the blind live in rural areas. The United Nations has in this field had the privilege of associating its technical assistance experts with the efforts of member governments in the establishment and development of welfare and education programmes for the blind.

It would be utterly inappropriate not to mention in this context the leading role which the voluntary sector has always played and substantially continues to play in the field of social services and in particular the rehabilitation of the disabled. This is a trend which has become a clearly established tradition in the development of these services in economically more developed countries. I wish to place on record that the voluntary effort in this field continues to play a leading role not only in the development of services for the disabled, but does in developing countries continue its traditional role of showing the way and supplementing inadequate government action.

I now wish to touch upon the role of UNICEF in dealing with the disabled. UNICEF does broadly speaking subscribe to the overall UN policy of concern and interest in this vast problem. There are, however, limiting factors determining UNICEF's approach in these matters.

The first is our mandate which derives from the several General Assembly resolutions directing UNICEF to devote its attention to long term developmental programmes to improve conditions for children and youth in economically under-developed countries.

The other limiting factor is the extremely stringent financial position of UNICEF which has to be seen against the background of the great demand for UNICEF assistance which is generated by the tremendous problems which face children and youth in developing countries. As a result extreme care has to be devoted to the selection of programmes in areas where UNICEF support can have maximum impact.

Very precise criteria have over a number of years been established for the utilisation of UNICEF funds. Recent development of UNICEF assistance policy has been greatly influenced by the Declaration of the Rights of the Child, which was passed unanimously by the General Assembly in 1959. As result an increasing share of UNICEF funds has since 1961 been allotted to the fields of education, vocational guidance and training and social services. At the same time aid in the fields of health and nutrition has continued. The declaration of the rights of the child in point five affirms that all handicapped children are entitled to special treatment, education and care. As a result UNICEF has in the past supported a number of projects aiming at the rehabilitation of the disabled children including the blind.

It is realised, however, that the rehabilitation of the handicapped child requires assistance through a team approach combining social, health, educational and vocational training services, which by their very nature are *expensive*. It is a tragic fact that it is completely beyond the resources of less developed countries to meet the demands, which comprehensive long term rehabilitation plans for the disabled would require.

The development of policies and the establishment of priorities take place in a situation where needs are overwhelming and resources very meagre. It is the acute disparity between needs and resources which makes planning and decisions for lines of action so difficult. Not even elementary services in the fields of health, education and welfare are accessible to most families in these countries. Regrettably, many governments do not provide special services for the handicapped and in consequence only limited assistance can be given by UNICEF.

This does not mean that UNICEF has a negative attitude to the painful problem of the handicapped. On the contrary UNICEF has a very active interest in large scale measures to *prevent* the disabling of children through disease and malnutrition. There is no doubt that millions of children have been shielded from the threat of blindness through the mass campaigns against such diseases as trachoma, to which UNICEF has contributed substantially. Long-term health and applied nutrition projects which are receiving substantial UNICEF support are also making an important contribution to the prevention of blindness. This preventive action constitutes UNICEF's main contribution to the eventual solution of the problem of the physically handicapped.

At the same time the UNICEF Executive Board has as already mentioned considered it appropriate to provide limited assistance to certain measures on behalf of handicapped children. A number of countries have begun to develop the core of technical services for the rehabilitation of the physically handicapped and UNICEF has given modest support to many of these. UNICEF assistance is focussed on the support of training facilities in the country itself. In relation to training programmes, UNICEF has also assisted a limited number of demonstration service facilities some of which include vocational training. UNICEF also supports the local production of Braille texts.

Even within the field of the physically handicapped, it has been necessary to establish certain priorities and to proceed on a selective basis. The projects which have been assisted have been working with relatively simple and inexpensive measures where the technical skills required do not demand a very sophisticated level of training. UNICEF has not assisted specialised services for those forms of physical disability which require advanced technical skills and very complex equipment which can be maintained only in a sophisticated institutional environment.

For similar reasons UNICEF has considered it preferable to support out-patient services rather than residential institutions.

UNICEF policy with respect to services for handicapped children may then be recapitulated as follows:—

1. Prevention comes first—through various health and nutrition projects.
2. National training and demonstration facilities may be supported.
3. Demonstration service facilities related to training may be aided.
4. The local production of Braille texts may also be aided.

The constitution of the World Council for the Welfare of the Blind states unequivocally that the purpose of the Council shall be to work not only for the welfare of the blind but also for the prevention of blindless throughout the world. May I conclude this statement by making with all the emphasis at my command a plea to the Council and its member governments and associations for an increased effort for the prevention aspects of blindness thereby reducing the demand for rehabilitation services which as already mentioned are completely beyond the possibilities of humanity to provide to the full extent required.

STATEMENT BY MR P. M. MENON — I.L.O.

On behalf of the Director-General of the I.L.O. it is my pleasant duty to convey the greetings and good wishes of the I.L.O. to this distinguished gathering.

The I.L.O. is grateful for the opportunity of attending this important assembly organised by the World Council for the Welfare of the Blind. As you may possibly know this year the I.L.O. is celebrating its 50th Anniversary. These past 50 years have seen constant efforts by the I.L.O. to promote the dignity and welfare of man by world-wide co-operation of governments, employers and workers. It is with this basic philosophy of respecting the individual rights and status of a human being that the I.L.O. has always considered vocational rehabilitation programmes for the disabled, including the blind, as one of its important areas of activity. The I.L.O.'s message of hope to the disabled is found in an official international instrument—I.L.O. Recommendation 99—which, in substance, calls for a place for all disabled persons throughout the world. Its importance was re-affirmed as recently as June 1968 by the I.L.O. Conference which unanimously adopted a resolution concerning disabled workers, stressing *inter alia* the right of the disabled to work and the need for member states to provide the widest possible employment opportunities for such workers.

The I.L.O.'s major activity in the field of vocational rehabilitation is the provision of advisory expert assistance. In the past fifteen years more than 50 developing countries have drawn directly on I.L.O. technical co-operation in vocational rehabilitation, for the purpose of establishing new services for the disabled or expanding existing services. Sometimes national services have been developed within the framework of a social security scheme; some schemes owed their existence to the initiative of voluntary organisations; others were built on existing services in Ministries of Health, Social Welfare, Community Development or Labour.

These I.L.O. technical co-operation activities are mentioned in some detail in the booklet "The I.L.O. and Vocational Rehabilitation" but I would like to mention one of the I.L.O. rehabilitation projects which was implemented in India. This was a four years' mission to help with the development of vocational rehabilitation services for the blind, and in particular with the improvement and expansion of training facilities at the Training Centre for the Adult Blind at Dehra Dun. As a result of the expert's efforts, effective training courses for the blind in light engineering occupations were established; the whole procedure for the assessment and evaluation activities was re-organised; the manufacturing of special appliances including folding canes, braille shorthand writers and teaching aid equipment has proved to be very successful. The expert spent a great deal of time on the practical aspects of vocational training with the result that an excellent sub-contract workshop was set up to enable the blind trainees to undertake production work. Similar I.L.O. projects related especially to the vocational rehabilitation of blind persons were carried out in Algeria, Brazil, Ceylon, Ethiopia, Greece, Mexico and Tunisia.

Of course this intensive programme has not been undertaken in isolation. Success of any rehabilitation programme has its roots in teamwork, and a major feature of the I.L.O.'s programme has been the extent to which it has been developed through a system of close UN inter-agency co-operation and with the active support of national and international, non-governmental organisations. In this connection it is particularly pleasing for us in the I.L.O. to be able to pay special tribute to the assistance and support given to I.L.O. programmes by the World Council for the Welfare of the Blind, which as you may know, has a special relation with our organisation, included as it is on I.L.O.'s special list of non-governmental organisations for co-operation purposes.

This meeting has brought together specialists from many walks of life whose aims and ideals are to ensure that the blind have equal opportunities with the sighted of becoming socially adjusted and vocationally prepared and trained, thus enabling them to be integrated successfully into a normal society. In conveying our best wishes to this meeting may I re-affirm that the I.L.O. will continue to work in the closest possible association with all national and international organisations who are concerned with the well-being of the disabled in an endeavour to promote the progressive development of vocational rehabilitation services for disabled persons throughout the world.

STATEMENT BY MR JOHN M. HOWE—UNESCO

I have been very much interested, and impressed, in examining the documentary material prepared for this Assembly. Closest to our own concern, I thought that Major Bridges made some very sensible remarks in his article on International Action in Developing Services for the Blind in Asia.

For those of you who are not already aware of it, I shall have to admit right away that UNESCO is essentially a newcomer in this field. It will take me only a few minutes to give you an adequate idea as to what we have been doing during the last couple of years, and of what we are likely to be able to do.

Our Organization's concern is, of course, especially with educational problems, and educational questions related to the blind are considered with those related to other handicapped children and young people, under the more general heading of "Special Education." It was late in 1966 when our biennial General Conference voted a programme and budget for 1967-68 in which "Special Education" appeared for the first time as a distinct project. The actual funds appropriated were only a few thousand dollars, and our Director-General was authorized to "develop a programme in special education for handicapped children and young people on the basis of voluntary contribution from Member States."

In December last year we invited a group of ten experts on special education for the handicapped to make recommendations regarding the broad outlines of a long-term UNESCO special education programme. This group, in which your Secretary-General, Mr Jarvis, took a most valuable part, prepared a short but meaty report, from which I am tempted to read large chunks! However, I confine myself to quoting the following paragraph on basic philosophy.

"National policies in regard to special education should be directed to the goals of providing equal access for all to education and of integrating all citizens into the economic and social life of the community. Special education is a part of ordinary education. In the past, provision was made mainly for the more severe and readily identifiable cases of handicap, who then became more a medical concern, hence prevailing views tended to become pessimistic and residual elements of these attitudes still obtain in some places. The proposed reorientation towards community care marks a new trend of optimistic action in helping those who suffer from disabilities. Community care calls for new attitudes towards the social role of education and of schools; and the widened conception of community health calls for increased responsibility on the part of teachers, physicians, social workers and administrators and all concerned with special education. The aims of special education for those who showed mental, sensorial, physical or emotional impediments are precisely those of education in general, i.e., offering the child the maximum opportunity to develop cognitive, scholastic and social skills to the highest possible level."

The group also gave some criteria for selecting projects which might be aided by UNESCO, noting, among other considerations, that a project will be promising to the extent that it is integrated into the educational system, and prepares pupils to take an active part in the community. Accordingly, account should be taken of the extent to which provision is made, as an integral part of the project, for such vocational guidance and training as will prepare children for modern trades and professions, and allow them to attain the highest degree of qualification.

Our 1968 General Conference approved a somewhat larger appropriation, and authorized the Director-General to "carry out a programme of studies on special education for handicapped children and young people, and to help Member States to develop and improve special education, using in particular extra-budgetary resources, including such voluntary contributions as may be made for this purpose."

The Director-General appealed early last year to all Member States for voluntary contributions to a special fund for special education. As of the end of 1968, positive responses had been received from eight countries: Cambodia, Ghana, Israel, Malta, Morocco, Norway, Sweden and Yugoslavia which together, paid or pledged a total of something over $25,000. From these modest funds, arrangements have been made to provide consultant services to five countries during 1969-70 including assistance in the training of teachers for the blind, or partially sighted, in Cuba, Ethiopia and Iran.

UNESCO has also used for some time, its Gift Coupon Scheme as a channel to convey contributions from individuals, schools and non-governmental organizations to projects approved by UNESCO, for the purchase of educational equipment and supplies. During the current year, the Gift Coupon Programme is publicizing the special education programme and is undertaking fund-raising campaigns, inviting gifts from the public for the provision of equipment to Centres dealing with special education of handicapped children and young people. Projects in twelve countries, most of them involving equipment for the blind, have been selected for this current campaign.

Regional Technical Assistance funds from the United Nations Development Programme have been used to help organize a training course in Denmark for twenty-five teachers and school-leaders from the Arab States who are concerned with the education of blind children and young people. This course was concluded about three weeks ago.

We are also starting to do something in the way of studies and surveys.

1. A directory of national agencies and institutions dealing with special education was published in December 1968.

2. The Secretariat has carried out a survey on legislative provisions for special education. After consultation with several competent non-governmental organizations, a questionnaire was sent to a limited number of Member States. The thirty-four answers received have been analyzed, and the report is now about to be published.

3. We have started a study on the present situation and trends of research in the field of special education, and contracts with four institutions covering different geographical areas, have been drawn up, to indicate the main lines of research in each area.

4. UNESCO is also producing an illustrated brochure to further the interest of the general public in the special needs of the handicapped.

I will conclude by pointing out that, just last month, there was held in Paris an inter-agency meeting on rehabilitation, for discussion of our co-ordinated action in this field with our sister agencies of the United Nations family, such as are represented with us here this morning. Thus we are trying to find the ways in which we can be the most useful—even with only modest financial means, in supplementing the more important work which is being carried on by public institutions and, especially, non-governmental organizations like yourselves.

STATEMENT BY DR F. J. LOVEN—WHO

Mr Chairman, Ladies and Gentlemen,

It is not only a great honour for me, as the Representative to India of the World Health Organisation to have been invited to this Fourth World Assembly of the World Council for the Welfare of the Blind, but also a pleasant duty to read a statement concerning WHO assistance in the fields of trachoma and smallpox control as well as in Vitamin A deficiences which are the major diseases which cause blindness and which can be prevented.

Twenty-Second World Health Assembly

Prevention of Blindness

The Twenty-second World Health Assembly,

Recognising that most of the world's blindness is preventable and that much of it is curable,

Noting the programmes on communicable eye diseases, especially trachoma and enchoceriasis, conducted by WHO and the efforts which are being made by various governments to control these and other causes of blindness, including injuries and vitamin A deficiencies,

Noting also the increased activity in this field by non-governmental organisations concerned with blindness and its prevention and the recommendation of these organisations that there is need for : the compilation and evaluation of more systematic information, clearer identification of practical objectives, and improved machinery for international co-ordination,

REQUESTS the Director-General:

1. To undertake a study on the information which is at present available on the extent and all causes of preventable and curable blindness and to propose activities in this field which the Organisation would carry out within its programme of work ; and
2. To collaborate, as may be required, with other organisations having an interest in this domain, including certain non-governmental organisations in relation with WHO.

Twelfth plenary meeting, 23 July 1969
A22/VR/12.

WHO Assistance to Trachoma Control

A Message

When Leonardo da Vinci called the eye the window of the soul he said only half of it: that remarkable organ is also the barometer of metabolism, an aid to diagnosis, and an object of more superstition and folklore than all the other organs put together. It is also the seat of one of man's most precious and, in this region with its widespread trachoma, most threatened possessions—his sight.

The eye long remained a *terra* not only *incognita* but also *mystica*, which man dared not explore. Hence, the history of ophthalmology reflects a conflict between mystic prejudice and practical necessity. Nevertheless by about the third millenium B.C. eye diseases were being treated in a practical, though highly risky fashion.

When the World Health Organisation entered the field twenty years ago, any exact information on the prevalence of trachoma in South-East Asia was conspicuous by its absence. Such reports as were available suggested a sizable problem in Afghanistan and a lesser one in Burma, that the disease was uncommon in Ceylon but was of high prevalence in the northern part of India and that it was a serious problem in Indonesia, as well as, probably in Thailand. Nothing was known about Nepal.

In 1959, the South-East Asia Regional Office of WHO provided a consultant to work with the Indian Council of Medical Research in a preliminary investigation. Preliminary studies led in 1955 to an epidemiological study of the factors favouring transmission of the disease in a WHO-assisted pilot project and to studies of the minimum effective course of antibiotic treatment and of the necessary field organisation for control.

Surveys carried out in the Indian pilot project covered fifteen States, and the results, published in a WHO South-East Asia Regional Office report with Dr. U. C. Gupta signing as co-author, showed a variation of prevalence from 0-5 per cent of total trachoma in West Bengal to 79.1 per cent in the Punjab.

In 1962, a WHO-sponsored conference on trachoma was held in New Delhi, with participants and a large number of observers from the five affected countries of the Region as well as from four other WHO Regions. At this conference, the current status of trachoma, the extension of programmes and the problems were fully discussed. It was preceded by a four-week inter-regional training course on trachoma, organised in Aligarh (Uttar Pradesh).

The prospect of each of the inhabitants of Uttar Pradesh was more hopeful than in many other areas. Slowly but surely the trachoma teams from the Gandhi Eye Hospital there, or field research teams from the University of Aligarh's Institute of Ophthalmology, combed each region, working their way systematically from village to village, house to house.

The trachoma teams must per force do an educating job, pointing out contributory factors in the spread of disease, such as the use of common towels, children sharing their parents' bed, infected water supply, poor ventilation for kitchen smoke, even the use of kohl, the traditional eye make-up of Indian women, young and old.

These continued efforts against trachoma, together with the spotting of other eye disorders, should eventually reduce the appalling number of blind in India, now thought to total two million people. A major spur to continue the fight is the knowledge that over two thirds of the world's blind could now see, if only they had received available medical or surgical care in time.

Trachoma control activities in India are now being carried out as an integral part of the basic health services. But only with the active participation of the community can the policy of integration of communicable eye disease control with the general health services be entirely successful. The World Council for the Welfare of the Blind can certainly be of great assistance in arousing an awareness in the community of the problems involved in fighting this age-old dreaded disease so as to reduce transmission of infection, morbidity and disabling conditions to such a level that trachoma and secondary bacterial eye infections will cease to be a public health problem in this and other affected countries.

Trachoma

After the isolation and serial culture of the causal agent in the mid-1950's, it had been hoped that mass immunization against trachoma would make it possible to prevent and control the disease. The experimental vaccines tested in several countries, however, have so far resulted at best in only partial and temporary protection, and the emphasis continues to be on improving the efficacy of treatment and on developing the knowledge of the epidemiology of the disease.

The Francis I. Proctor Foundation for Research in Ophthalmology, University of California Medical Centre, San Francisco, was designated in 1965 as a WHO International Reference Centre for Trachoma. A Conference on Trachoma and Allied Diseases was held there in 1966. The Proceedings of the Conference, which have been published (see bibliography), constitute a very significant contribution to all the various aspects of the problem. In addition to its basic reference function, the San Francisco centre is actively pursuing a research and training programme.

An inter-regional programme of research on trachoma was carried out from 1965 to 1967 by a WHO microbiologist in Tunis and in San Francisco. The two main objectives of this programme were to develop a relatively simple procedure for determining the antibiotic sensitivity of the trachoma agent in the laboratory and to investigate the possible role of extra-ocular reservoirs in areas where the disease is endemic.

Studies in Jerusalem which may lead to the development of better antigens and of new therapeutic approaches have continued to receive WHO support.

A new field record card, allowing for a uniform world-wide system of recording clinical signs, has been designed and is now in use in seven countries. The processing of data is carried out at WHO headquarters by computer. The system provides the means for a continued appraisal of control operations in different parts of the world.

A study of the epidemiological and long-term results of treatment of trachoma—one of the largest epidemiological studies of trachoma ever made—is now being completed in China (Taiwan). The application of epidemiological models has permitted the description of the disease process in terms of a quantifiable risk of infection and chance of healing. A scoring system has been developed to serve as a quantitative measure of changes in the disease with time. A small-scale interim evaluation conducted late in 1966 has shown a continuing favourable response to antibiotic treatment. Available data suggest that the effect of treatment is first to lessen the severity of clinical signs and to favour cure, and later to reduce the incidence and hence, in the long run, the prevalence of the disease. The final evaluation, at present under way, will undoubtedly have a major influence on future methods of trachoma control.

A WHO Scientific Group on Trachoma Research met in Geneva in 1965. The Group reviewed methods of laboratory diagnosis, the relationship between trachoma, including conjunctivitis and ocular lymphogranuloma venereum and between agents isolated from these syndromes, and developments with regard to vaccination and treatment.

Smallpox

World-wide efforts now under way are to put a stop to smallpox once and for all.

In each country, every person is still potentially exposed.

Progress

Despite more complete reporting, the number of known smallpox cases declined from over 120,000 in 1967 to 74,000 in 1968, a reduction of about 40 per cent. Partly attributable to effective programmes in many countries, the very low figure may also reflect cyclical variations in smallpox incidence.

Under WHO's global eradication programme there was an increase of activity in many parts of the world since 1968.

Eighteen of the 27 countries with endemic smallpox are running eradication programmes ; six others plan to start during this year.

The countries of western and central Africa recorded impressive progress : smallpox transmission has almost stopped. 65 million persons out of a total population of 119 million in 19 countries in the area were vaccinated during two years with assistance from the USA and WHO.

In Brazil, the rhythm of vaccination has reached almost 2,000,000 a month and recorded cases declined by over 10 per cent, which is all the more impressive since notification has considerably improved.

Almost 80 per cent of the world's smallpox cases continue to occur in Asia, mainly in India, Indonesia and Pakistan. Programmes are under way or planned in all endemic countries of this area.

Jet-injectors or bifurcated needless, which offer considerable advantages, are now being used for at least 75 per cent of vaccinations in eradication programmes. The jet-injector can be employed to vaccinate as many as 500 to 1,000 persons an hour. With both instruments, up to five-fold savings in vaccine may be achieved.

Potent freeze-dried vaccine is now being used by all endemic countries. Donations to WHO as well as bilateral contributions have made this possible. As many as 84,000,000 doses have been donated to the WHO programme by Belgium, Czechoslovakia, the German Federaal Republic, Hungary, the Netherlands, Monaco, New Zealand, Philippines, Switzerland, Thailand, the USSR and Yugoslavia. Other donations in cash and kind have come from Greece, Kuwait, Luxembourg, Poland, Uganda and private sources in France and Japan.

Under bilateral assistance programmes, the USSR has provided more than 100,000,000 doses, the USA 40,000,000 plus a 20,000,000 epidemic reserve for use throughout the world, and Brazil and Argentina several million doses for South American countries.

The Future

Of the 1,000,000,000 people who live in the smallpox-endemic areas of the world, it is estimated that 200,000,000 were vaccinated last year. The number of persons vaccinated in 1969 is expected to be 25 to 50 per cent higher. Concerted efforts to improve smallpox surveillance are being made in all countries. A decline in smallpox incidence concurrent with more complete and accurate case reporting will be the fundamental measure of success in the years to come.

As long as a reservoir of smallpox remains anywhere on earth, every nation, every person, is potentially exposed. Victory, to be total, must be world-wide.

Long-term, more detailed epidemiological studies are planned to determine how, why, where and to whom smallpox is being transmitted as a guide to further programme execution.

Special studies to characterize fully the monkeypox virus and infection, both virologically and epidemiologically, are now in progress in three WHO-supported projects as well as in two other collaborating research institutions.

Developmental studies of vaccinia virus grown in tissue cultures are well advanced and field studies are contemplated for 1969.

It is planned to establish a network of international, regional and national diagnostic and reference smallpox laboratories during 1969-70. Special studies aimed at simplifying diagnostic techniques are now in progress.

Onchocerciasis

Vitamin a Deficiency

Vitamin A deficiency is a major pediatric nutritional problem all over the world and is one of the most important causes of preventable blindness.

In Jordan, with the assistance of WHO, the epidemiological study to determine the factors responsible for the occurrence of xerophthalmia and keratomalacia resulting from hypovitaminosis A was continued. It included a field investigation and an investigation of in-patients admitted for xerophthalmia in a hospital. The field investigation started in October 1963. Households were surveyed in a thoroughly worked out sample of population : information was obtained on the composition of the family, its financial resources and housing conditions, the food consumption, the breast-feeding, the weaning practices and special feeding habits during pregnancy and lactation. All the children of the households surveyed who were under 6 years of age were medically examined, and blood determinations for haemoglobin, vitamin A, carotenoids, serum amino-acid ratio and, whenever possible, total proteins were made. In order to assess the influence of seasonal variations, each district surveyed was visited twice, once during winter and a second time during summer. At the end of 1964 a total of 532 families with 1,180 children under 6 years of age had been surveyed. Sick children received appropriate care and treatment whenever necessary.

The hospital investigation, which began at the same time, lasted until August 1965. Each child admitted for xerophthalmia was clinically examined, a venous blood sample and liver biopsy were taken and the child was immediately put on treatment including vitamin A therapy by the oral or parenteral route. Follow-up assessments were done clinically together with other examinations mentioned above. Before discharge, a final assessment was done. The families of the hospitalized cases and all their siblings from birth to 6 years of age were investigated at their homes by the physician in charge of the field study.

The epidemiological study revealed a prevalence of a mild to moderate degree of xerophthalmia in about 8 per cent of the children examined. The age at which the incidence of xerophthalmia was at its peak in the children studied, as well as in cases notified to the health authorities, appeared to be between 30 and 40 months. This meant that the infants were probably born with low vitamin A reserves, which instead of being replenished during the first two years of life were most likely depleted. Among the factors contributing to the hypovitaminosis A were inadequate supplementary feeding and low levels of vitamin A in breast milk. Protein calorie malnutrition, respiratory infections and diarrhoeas probably contributed to the comparatively high rate of xerophthalmia.

In India, clinical studies of children suffering from kwashiorkor with and without ocular signs of Vitamin A deficiency were undertaken. It was shown that the children suffering from kwashiorkor but without ocular signs of hypovitaminosis A had a higher level of vitamin A than those with either xerosis or Bitot's spots. Also, no vitamin A could be detected in the serum of the subjects with keratomalacia. These results suggested a rough correlation between the level of serum vitamin A and the presence or absence of ocular signs of vitamin A deficiency. While this was true for the group averages, in individual cases serious vitamin A levels did not always correspond to the nutritional status of vitamin A as judged clinically.

Studies on the influence of different preparations of vitamin A and of the rate of administration were conducted with interesting results.

A pilot study aimed at the prevention of Vitamin A deficiency was also completed. In this investigation 2,500 children between 1 and 5 years of age were administered once a year a single dose (150,000—300,000 International Units) of a preparation of vitamin A. At the outset of the study, 8-10 per cent of the children had ocular signs of vitamin A deficiency. Taking into consideration the number of children in each age-group who had xerosis of the conjunctiva and Bitot's spots at the time of collecting the base-line data, the expected prevalance rates of these two clinical signs were worked out for the number of children followed up during the first two years of the trial. It was observed that the actual number of subjects who showed the signs was considerably lower than the expected number and it was also significant that not a single case of keratomalacia was seen.

As you have seen WHO has given some priority to the control of Trachoma and Smallpox and Vitamin A deficiencies, as well as research in connection with these diseases. It is our hope that within the next decade blindness due to these diseases will be considerably reduced and perhaps eliminated.

BUSINESS SESSION 2 **Thursday morning, October 16, 1969**

Chairman: **Mr Eric T. Boulter,** *President, World Council for the Welfare of the Blind*

PRESENTATION AND ADOPTION OF CONSTITUTIONAL AMENDMENTS

The Assembly discussed and Adopted the following Amendments to the Council's Constitution :—

Article I.

The substitution of the word PROMOTION for the word PROTECTION in the French title of the Council.

Article III.

The addition of a new category of Membership to be known as International Members, and the addition of a requirement that Associate Members shall be admitted to the Council only after consultation with the Delegation of the country concerned.

Article IV.

An extension of the arrangements for Proxy Votes so as to enable them to be given to any Member of the Council, and not only to a Member in the Region concerned.

The Council also adopted a recommendation providing for more precise arrangements for the conduct of Secret Ballots, when these are believed to be appropriate, but considered that these should not be included in the Constitution itself, but in an accompanying series of Rules of Procedure, to whose formulation the new Executive, to be elected on the following day, should be asked to give its consideration.

Article V.

The inclusion in the Executive Committee of two Representatives of International Members, and the deletion of the Secretary-General from Voting Membership of it, since he is to become a paid Official of the Council.

The Council tabled and referred to the next Executive Committee a proposal aimed at a reduction in the size of the Executive Committee, and another which would give the Executive authority to arrange for the attendance of a limited number of Experts at future meetings of the Executive Committee whose Agenda might make this advisable.

Article VIII.

A modification in the arrangements for Representative Membership of smaller countries which would permit those with a general population of less than three million to name only one Member, and to pay an annual Membership Fee of only $100, or its equivalent.

The present text of the W.C.W.B. Constitution, after the incorporation of all Adopted Amendments, now reads as follows:—

CONSTITUTION
OF
THE WORLD COUNCIL
FOR THE WELFARE OF THE BLIND

(Revised, New Delhi Assembly, 1969)

WCWB

ARTICLE I

NAME AND LOCATION

Section 1.—NAME. Under the name of the WORLD COUNCIL FOR THE WELFARE OF THE BLIND (ORGANISATION MONDIALE POUR LA PROMOTION SOCIALE DES AVEUGLES) an association is hereby formed in accordance with the law of 1st July, 1901, between the representatives of organisations of and for the blind.

Section 2.—LOCATION. The Headquarters of the Council shall be located in Paris, France, at 14bis, rue Daru. It may be transferred by decision of the Executive Committee to any location in the Seine Department.

Section 3.—DURATION. Its duration shall be unlimited.

ARTICLE II

PURPOSES

The purposes of the Council shall be to work for the welfare of the blind and the prevention of blindness throughout the world by providing the means of consultation between organisations of and for the blind in different countries, and by the creation of co-ordinating bodies where necessary, and for joint action wherever possible towards the introduction of minimum standards for the welfare of the blind in all parts of the world and the improvement of such standards.

ARTICLE III

MEMBERSHIP

Section 1.—CLASSES. Membership of the Council shall be open to nationals of all countries of the world and shall consist of:

(a) Representative members,
(b) Associate members,
(c) International Members, and
(d) Honorary Life Members.

Section 2.—REPRESENTATIVE MEMBERS. Representative members shall be those members nominated by each country participating in the Council, always providing that their nominations shall be supported by resolution of their national nominating body and that these must be in the hands of the Secretary General at least three months prior to the General Assembly. Except in the case of illness or other emergency, delegates to the General Assembly shall consist of those persons whose names appear on the Secretary General's list three months prior to the opening of the General Assembly. Countries having a general population of less than twenty million shall be entitled to name two Representative Members. Countries with a general population between twenty million and forty million shall be entitled to name four Representative Members. Countries with a population exceeding forty million shall be entitled to name six Representative Members. Where in any country there exists a substantial group of blind persons organised into associations and where there are blind persons occupying leading positions in agencies for the blind, adequate provision should be made for their representation in the national delegation. Countries having non-self governing territories under their administration should, wherever possible, arrange for the views of such territories to be expressed by their Representative Members. In the event of a country being unable to agree on the nomination of any Representative Member or Members, the Executive Committee has power to invite such person or persons from within the country concerned as it considers best qualified to represent that country's interests. All Representative Members should hold or have held responsible positions in the direction or administration of recognised organisations of or for the blind.

Providing the terms of this article are complied with, any individual whose permanent residence and professional employment is located within a member country shall be eligible to serve as a Representative Member of that country's delegation regardless of the nationality of such individual.

Section 3.—ASSOCIATE MEMBERS. Upon payment of an annual membership fee of fifty dollars ($ 50) in the currency of the United States or the equivalent of such amount in French francs or Pounds sterling, any person or organisation may be admitted by the Executive Committee to be an Associate Member of the Council and may be eligible to serve on its Committees other than the Executive Committee and the Finance Committee as non-voting members. Individuals who are Associate Members may become Representative Members if so nominated by their respective countries. Associate Members shall be admitted only after consultation with the Representative Members of the country concerned.

Section 4.—INTERNATIONAL MEMBERS. Any International Agency may be authorized by a Resolution of the General Assembly, approved by not less than two-thirds of the Members present and voting, to appoint one International Member of the Council. To qualify for such membership, the Agency shall be one which is exclusively international in scope and which promotes or co-ordinates a substantial programme of activities for the benefit of the blind or for the prevention of blindness. An International Agency which makes such an appointment shall pay to the Council an annual fee of two hundred dollars ($200) in the currency of the United States or the equivalent of such amount in French francs or Pounds sterling.

Section 5.—HONORARY LIFE MEMBERS. Any person proposed by the Representative Members of any country as having rendered outstanding services to the Welfare of the Blind in any part of the world may, with the approval of the General Assembly, be elected an Honorary Life Member of the Council. The reasons for such election shall be fully stated at the time of election.

ARTICLE IV

THE GENERAL ASSEMBLY

Section 1.—COMPOSITION. The Representative, Associate, International and Honorary Life Members shall constitute the General Assembly, which shall be convened by summons posted in Paris not less than two months before the date of meeting. In the event of any participating country being unable to send a representative entitled to vote at the meeting it may give its proxy or proxies to a representative of any other country. Any country which is entitled to send more than one Representative Member may authorize one of its representatives who attends to exercise a proxy on behalf of each representative who is absent. Notice of such proxy must be given in writing addressed to the Secretary General before the meeting of the General Assembly at which it will be exercised. The General Assembly shall normally meet at intervals of five years but may meet at greater or lesser intervals of time if it so desires.

Section 2.—FUNCTION. The General Assembly will determine the general policies to be adopted by the Council towards achieving its purposes and shall elect the Executive Committee as provided for in Article V, Section 1, of this Constitution. The General Assembly shall also consider all recommendations put forward by the Executive Committee, receive the report of the work of the Executive Committee, and the Treasurer's accounts, and approve them. It shall vote on the budget and appoint the officers of the Council.

Section 3.—VOTING. (a) Only Representative, International and Honorary Life Members are eligible to vote at meetings of the General Assembly, but Associate Members may participate in the discussions in a consultative capacity. (b) All questions shall be decided by the majority of those Representative, International and Honorary Life Members voting, whether present or by proxy, with the exception of amendments to the Constitution. (c) Voting may be viva voce, by show of hands, or by ballot, which may be secret, as may be decided at any meeting. Between meetings of the General Assembly questions which in the judgment of the Executive Committee lie outside the powers committed to it may be decided by letter ballot of all members of the Assembly.

Section 4.—ASSEMBLIES. Assembly meetings shall be ordinary or extraordinary.

Extraordinary meetings of the Assembly may be convened by the Preisdent in exceptional circumstances. When attending meetings of the General Assembly, delegates will be responsible for their own travel and maintenance expenses.

ARTICLE V

THE EXECUTIVE COMMITTEE

Section 1.—COMPOSITION. Until otherwise determined by the requisite majority of the General Assembly there shall be an Executive Committee elected to serve from the conclusion of one General Assembly until the conclusion of the next General Assembly. The Executive Committee shall consist of seven (7) Representative members from European countries, five (5) from North and Central America, five (5) from the East and South East Asia area, two (2) from South America, two (2) from the Middle East area, one (1) from Oceania, three (3) from Africa, also two (2) Representatives of International Members, and such other individuals up to a maximum of three (3) in number as may be elected by the General Assembly, also the Chairmen of all Consultative Committees; also the President and the Treasurer who shall not hold territorial status during their respective terms of office, and whose seats as Representative Members shall during such time be available to other persons elected to the General Assembly by the countries concerned.

At any meeting of the Executive Committee a majority of the elected members shall constitute a quorum for the purpose of conducting business.

The representatives of member countries of each specified area shall be responsible for designating the individuals to represent them on the Executive Committee. All members of the Executive Committee shall be eligible for re-election.

Should a member of the Executive Committee serving as an elected representative of a regional area be prevented by good cause from attending any meeting of the Committee, the representatives of the member-countries of that area shall be responsible for naming a substitute. A substitute member acting for a member who is unable to attend any meeting shall have full speaking and voting rights during that meeting.

In the event of a vacancy occurring through the death, resignation or other cause of a member of the Executive Committee serving as an elected representative of a regional area, the representative membership of that regional area shall be requested to elect a replacement to serve until the next General Assembly. In the event of a vacancy occurring through the death, resignation or other cause, of any other member, the Executive Committee shall have power to name a replacement, provided that the person so named shall be in good standing with his own association. Provided his election is agreeable to his national delegation a substitute shall enjoy exactly the same rights as those held by the person he replaces.

Section 2.—FUNCTION. The Committee shall have power of decision and be directly responsible to the General Assembly for interpreting and carrying out in detail the general policies agreed upon by the Assembly for the administration, management and control of the property and affairs of the Council.

The Executive Committee shall have the widest powers to do and authorize any action not specifically reserved for the General Assembly. It shall supervise the administration of the Officers of the Council and has the right at all times to ask for an account of their actions.

Meetings of the Executive Committee of the World Council for the Welfare of the Blind shall be held concurrently with meetings of the General Assembly, with one further meeting being held at a time to be selected between the General Assembly meetings.

The World Council for the Welfare of the Blind shall be reponsible for the maintenance costs of members of the Executive Committee and the guides of blind members, attending interim meetings between General Assemblies. The World Council for the Welfare of the Blind shall likewise be responsible for the travel costs of members of the Executive Committee, as well as for the travel costs of guides of blind members either in whole or in part, provided that such assistance towards travel costs of guides shall not be less than 50 per cent.

The President shall have power, if he deems it necessary, to ask for decisions on specific matters by postal vote of all members of the Committee.

Between meetings of the General Assembly questions which in the judgment of the Executive Committee lie outside the powers committed to it may be decided by letter ballot of all Representative, International and Honorary Life Members.

Section 3.—VOTING. All questions shall be decided by the vote of the majority of those voting.

ARTICLE VI

OFFICERS

(a) Officers of the Council shall be elected by the General Assembly from among those already elected to the Executive Committee. The officers shall serve from the conclusion of one General Assembly until the conclusion of the next.

They shall consist of a President, not more than five (5) Vice-Presidents and a Treasurer. The President and Treasurer during their terms of office shall not hold territorial status, and their seats as elected Representative Members of the Executive Committee during such time as they shall serve as President and Treasurer shall be available to other persons elected to the General Assembly by the country or countries concerned.

(b) The President shall preside over meetings of the General Assembly and Executive Committee and shall represent the Organisation in all civil actions. The President shall hold office for a period of one term and must thereafter be succeeded by a member of another national delegation following which he will become eligible for re-election.

(c) The Vice-Presidents shall perform such duties as may be assigned to them by the Executive Committee and those delegated to them by the President. Any one of them may preside over meetings of the General Assembly and Executive Committee in the absence of the President.

(d) The Secretary General and the Treasurer shall perform, under the direction of the Executive Committee, the duties properly appertaining to those offices.

ARTICLE VII

COMMITTEES

The International Council of Educators of Blind Youth and any other international organisation which may be designated for that purpose by the Assembly, shall have the status of a Consultative Committee of the World Council for the Welfare of the Blind. The Executive Committee may appoint a Finance Committee from its members to carry out specific financial duties, and any other Committees as it deems necessary to carry out such duties as it may delegate to them. The Executive Committee is responsible for the selection of members of these committees. Committees other than the Finance Committee may, subject to the approval of the Executive Committee, co-opt any persons who may be of help to them in discharging the duties delegated to them.

ARTICLE VIII

FINANCE

Section 1.—FINANCIAL YEAR. The financial year of the Council shall coincide with the calendar year.

Section 2.—MEMBERSHIP FEES. The membership fee shall be two hundred dollars ($ 200) annually for each country having a general population less than twenty million, except that countries with a general population of less than three million may pay an annual membership fee of one hundred dollars ($ 100) in which case they shall be entitled to name only one Representative Member to the General Assembly. The Membership fee shall be four hundred dollars ($ 400) annually for countries having a general population between twenty million and forty million; six hundred dollars ($ 600) annually for countries having a general population exceeding forty million. In each instance, the equivalent amount may be paid in French francs or in Pounds sterling. Membership fees shall be payable on the first day of January of each year. Members whose annual fee has not been paid within six months after the beginning of the financial year may be declared by the Executive Committee to have forfeited membership.

Savings made on the annual budget shall constitute a reserve fund which shall be banked and/or invested.

Section 3.—EXPENSES. It shall be the duty of the Executive Committee at all times to keep the expenses of the Council strictly within the income thereof. If, by reason of deficit in the anticipated income or for any other cause, the income is insufficient for work in hand or contemplated, the Executive Committee shall have power to raise additional funds by any legitimate means after consulting and with the approval of the representative membership of the country or countries in which such fund raising activity is to take place.

Section 4.—RECORDS. (a) The Executive Committee shall cause proper accounts to be kept. Account books and all Council documents shall be held at the office of the Council. (b) The accounts of the Council shall be examined and audited each year by qualified auditors. A statement showing the financial position of the Council shall be published, and a copy sent to each Representative Member within six months after the end of the financial year.

ARTICLE IX

AMENDMENTS

Section 1.—This Constitution may be amended at any meeting of the General Assembly, or, if in the opinion of the Executive Committee urgent action is necessary, by a postal vote of all members of the General Assembly, provided always that not fewer than two-thirds of the members who vote on the matter are in favour of the proposed amendment or amendments. The Executive Committee shall place before the General Assembly or take a postal vote on any amendment proposed in writing by five or more Representative Members of the Council. The exact text of the amendment or amendments proposed shall be placed before the General Assembly or members of the Council entitled to vote thereon. Any proposal for a constitutional amendment must be in the hands of the Secretary General three months before the opening of any Assembly.

Section 2.—DISSOLUTION OF THE COUNCIL. If at any time a dissolution of the Council should prove necessary or desirable, proceedings therefor shall be taken in the same manner as provided in Section 1 of this Article, except that such proceedings may not be initiated upon the request of any five or more members of the Council, but only on the recommendation of the Executive Committee. In the event of dissolution, any funds or other assets owned by the Council shall be liquidated in accordance with recognized legal procedure.

ELECTION OF INTERNATIONAL MEMBERS

It was proposed by Captain Desai, seconded by Mr A. N. Magill, and AGREED unanimously that requests received from the American Foundation for Overseas Blind and the Royal Commonwealth Society for the Blind for election as International Members of the Council be immediately approved, and that they be elected forthwith as International Members of the Council.

BUSINESS SESSION 3 **Thursday afternoon, October 16, 1969**

REPORT OF THE RESOLUTIONS COMMITTEE

Mr John Wilson, Chairman of the Resolutions Committee, presented the following nine Resolutions, which were unanimously Adopted by the Council :-

Resolution 1.

A Plea for Public Awareness.

This Assembly, representing Organisations concerned with blindness in 62 Countries, requests the co-operation of the World's Press, radio, television and publicity media in all countries, in bringing the following facts forcibly to public attention:

1. There are, by the lowest estimate, at least 15 million blind people in the world today. Unless decisive action is taken, this number may double by the end of this century. Two thirds of this blindness is due to preventable causes and much of it is curable. In Asia, Africa, Central and Southern America, where most of the world's blind live, there are millions whose sight could be restored by simple, inexpensive surgery.

2. Over 90 per cent of the world's blind children receive no systematic education. Denied this basic human right, they progress from a frustrating childhood to a life of illiterate dependency; great numbers die prematurely from the malnutrition which blinded them.

3. There must be at least 5 million blind men and women to whom modern systems of rehabilitation and training could offer a chance of economic independence. Denied such help, great numbers live out their lives as beggars, and family dependents; in impoverished communities they remain the poorest of the poor. The cost of rehabilitation is demonstrably minute compared with the massive and mounting cost of avoidable dependency.

4. This situation is a reproach in an age of science when curable blindness should be a barbaric anachronism and when the development of efficient "sight substitutes" is clearly a research objective well within the range of modern technology. The situation is likely to be remedied only when national and international authorities, stimulated and supported by informed public opinion, are prepared to devote to this cause the priority and resources necessary for decisive action.

Resolution 2

Technology and Equipment

Realising that limitation in the means of gathering information is a primary cause of poverty of experience, that discrepancies between the expected and the attained are a serious cause of maladjustment, and that the modern world's "information explosion" makes exceptional demands, and could imply exceptional opportunities, for blind people, their teachers and counsellors;

Welcoming the most promising efforts which are now being made by research workers in some countries to apply the resources of advanced technology to the development of "sight substitute" appliances to compensate for the traditional handicaps of blindness in mobility and communication;

Remembering, however, that for many blind people in many countries, the greatest need is for access to basic equipment which has long been in production, but is beyond their financial resources;

The Assembly Resolves

1. That the Council re-affirm that the aim of all its policies and the most cardinal principle of its philosophy is, by every means in its power, to encourage a total integration of blind people into the activities, production and cultural life of their community, and to penetrate every physical, mental, or cultural barrier which would obstruct any blind person from the realisation of maximum potential as an individual and as a citizen.
2. That every encouragement be given to the advancement of responsible and systematic technological research, and that priorities in such research should be kept constantly under review by the Council's Committee on Technical Appliances.
3. That all Member Organisations be urged to make better use of the International Research and Information Service (I.R.I.S.) by informing it of any equipment or appliances in production or under development in their country and by seeking from it information about development projects and available equipment.
4. That the Council, and its constituent International Organisations continue to do everything in their power to reduce the cost of basic equipment and to facilitate its distribution in countries where, through poverty or currency limitations the blind are denied such equipment, and that everything possible be done by the Manufacturers of such equipment to achieve reasonable uniformity.

Resolution 3.

Prevention and Cure of Blindness

Recognising that most of the world's blindness is preventable and that much of it is curable;

Alarmed by evidence that, despite increasing control of communicable eye diseases, the number of blind people in Africa, Asia, Central and Southern America—already massive—is increasing with population growth and that one consequence of increased longevity and reduced child mortality, may be an unprecedented increase in the number of blind children and old people, noting also that even in countries with advanced medical services, the number of the blind continues to grow with a disturbing increase in the prevalence of multiple handicaps amongst children;

Convinced that the world is here confronted by a medical and social task of major proportions requiring, as a matter of the utmost urgency, increased action on a national and international scale and the deployment of much greater resources in money and personnel;

Welcoming most cordially the Resolution adopted at a Meeting of the 22nd World Health Assembly held in Boston on 29th July, 1969, with its clear recognition of the size and urgency of the problem and its implication that W.H.O., which has already done valuable specialised work in this field, may henceforward be comprehensively involved in promoting measures for the Prevention of Blindness and for the collation of statistics;

The Assembly Resolves

1. That the World Council for the Welfare of the Blind should immediately seek consultative relationship with the World Health Organisation and should assure that Organisation of its readiness to collaborate to the maximum of its power in action following the Boston Resolution.
2. That the Council continue and strengthen its liaison with the International Association for the Prevention of Blindness and its encouragement of the activities of other non-governmental Organisations engaged Internationally in this field.
3. That in countries where effective machinery for the prevention of blindness does not already exist, the appropriate national delegation be urged to take the initiative in establishing such machinery and in ensuring that it has adequate recognition and support.
4. That all constituent organisations be urged, to the maximum of their constitutional power, to support, both nationally and internationally, ophthalmic re-

search, activities for the prevention and cure of blindness and all action designed to bring the facts more forcibly to public attention and to achieve a greater priority and sense of urgency in this work.

5. That the Authorities concerned with policy planning, whilst being understandably concerned with long-term preventative and environmental health measures, be urged simultaneously to promote and encourage measures of immediate relief and cure particularly in rural areas, and that where optimum facilities cannot immediately be provided, use should be made of mobile clinics and hospitals and of well organised village eye camps, to restore sight and prevent blindness.
6. The UNICEF and the Organisations concerned with ophthalmic research, famine relief and community development be urged to devote greater resources to a systematic investigation of the causes, both medical and social, of nutritional blindness and to the promotion of practical measures to reduce this scourge, which, if left uncontrolled, may well result in an unprecedented increase in the number of blind children in the developing countries.
7. That the World Prevention of Blindness Committee, having regard to the Council's previous Resolutions on this question, do everything in its power to promote International acceptance of a uniform definition of blindness.

Resolution 4.

National and International Action

Recognising that, despite impressive advance in some countries, the standard and scope of work for the blind in many countries still falls short of the minimum requirements suggested at the Oxford Conference in 1949, and repeatedly affirmed by this Council since its Foundation;

Re-affirming the validity and practicability of those minimum requirements and the right of blind people everywhere to opportunities in economic, social and cultural life equal to those enjoyed generally by the citizens of the countries in which they live;

Regretting that existing resources to cope with the formidable and growing problem of blindness in the developing countries, are most inadequate and concerned that such resources should be augmented and used to the best advantage;

Conscious of the importance and value of the programmes in this field of the United Nations and its specialised agencies and of the fact that further development of these programmes depends upon initiatives taken by participating Governments:

The Assembly Recommends:

1. That each National Delegation to the W.C.W.B. should examine the adequacy of the provision made for the blind in its country in the light of standards set by this Council, and, where achievement falls short of an acceptable minimum, should set up appropriate machinery to formulate a Development Plan with specific objectives and priorities, and, in a well-designed programme, should take vigorous and concerted action to mobilise nationally and internationally the resources necessary to achieve the objectives of that Plan.
2. That in these countries which have overseas aid programmes, the National Delegation to W.C.W.B. should examine the adequacy of the contribution which their country is making to the advancement of work for the blind and the prevention of blindness in the developing countries, and that, where a greater contribution is considered possible, should take the initiative, in consultation with the specialised international Organisations concerned, to achieve an increase in that contribution.
3. That National Delegations from the Developing Countries should, in consultation where necessary with the Specialised International Agencies concerned, identify needs and priorities and should take all possible action to urge their Governments to request the necessary aid from appropriate international sources.
4. That the United Nations, I.L.O., UNESCO and other Specialised Agencies with responsibilities in this field, should review their respective programmes with the intention of ensuring that adequate priority is given to the needs of the blind and that they should act, together with the Non-Governmental Organisations concerned, in conducting research into problems affecting the blind and into determining the best means of collecting, collating, classifying and distributing information in this field.
5. That the Secretariat of the World Council, and the International Organisations which are associated with it, should do everything in their power both to stimulate and systematise an increased flow of international and bilateral aid and also to strengthen arrangements for consultation and co-ordination between donor countries, to promote Regional co-operation and to achieve high professional standards in project planning.

Resolution 5.

Education

Recognising that in this age of science the need to provide education and vocational training for the blind, geared to meet the technological challenge and designed to enable them to lead a fuller life, is of fundamental importance,

The Assembly Recommends:

1. That blind people have the right to a basic technical training in the course of which they may acquire the knowledge and skills they need in order to overcome their handicap. Within that training the maximum use should be made of any residual vision. Blind people should be encouraged to maintain the standard of behaviour and appearance prevailing in their surroundings. The aim should be to give blind people the fullest possible independence and personal freedom. They should be given every opportunity to develop their initiative, their activities and their capacity for adjustment.
2. That all blind people are entitled to education, vocational training and development according to their individual capacities and their gifts. This right, consistent with the U. N. Declarations on Human Rights, is particularly important for blind people who must work competitively within a seeing community. The blind who have the necessary gifts and who have undergone the requisite training should have the same opportunity as sighted people to attend universities, technical colleges or other academic institutions offering higher education.
3. That blind people have the right to benefit from the services of teachers, educationalists and vocational training staff selected by reason of their aptitude and their concern for their students′ progress and who have been specially trained for the purpose. These teachers should keep abreast of the latest developments in their own subjects and in educational techniques; they should be concerned with everything that occurs to the individuals in their care, and be prepared to adjust themselves to constant changes in both society at large and in the requirements of specific trades and professions. The demands made on the teachers and instructors are high and to attract staff of the right calibre it is essential to ensure that they are paid a salary which recognises their special qualifications and experience. Among teachers and

instructors, there should be a number of blind people appointed on the basis of their capabilities in developed programmes.

Resolution 6.

Economic Opportunity

Aware that the cost to Society of the maintenance of its blind Citizens through Public Assistance and Family Maintenance is many times greater than the cost of programmes providing Rehabilitation, Training and Placement resulting in gainful occupations, thereby producing contributing instead of dependent Citizens;

Concerned that there exists throughout the World widespread discrimination against blind people in the employment field by reason of blindness;

Re-affirming that it is the right of every human being in every Society to be afforded opportunity to achieve maximum potential;

Acknowledging that for some blind people sheltered employment is necessary, expedient and desirable either as the interim or terminal employment, but cognisant that some workshop programmes in certain countries are inadequate because the employment in such undertakings all too frequently leads to terminal employment at sub-standard wages, working conditions and fringe benefits and with little regard to modern industrial and management techniques or to the profitability of the undertaking;

Conscious that in a rapidly changing technological situation, with increasing automation, retraining for a variety of occupations is a condition of competitive survival,

The Assembly Recommends:

1. That all countries be urged to endorse and invoke the principle that every blind person who is educable and trainable is entitled to self-attainment and to the opportunity to achieve full potential and remunerative occupation.
2. That Governments and Employing Authorities in all countries be urged to abolish all discriminatory practices, procedures or qualifications which would have the automatic effect of excluding or hindering blind persons from admission to or advancement in trade, profession, service or occupation.
3. That the Authorities concerned with planning employment programmes for the disabled should at all times ensure that the specialised needs of the blind are fully provided for, and that staff qualified and trained

to serve these special needs are utilised in any workshop training, employment, placement or after-care programme for the blind.

4. That rural training facilities, which are the only practicable outlet, for the employment of that majority of the blind who live in Agricultural Communities, should be recognised as the main element in the rehabilitation programmes of the Developing Countries. Re-affirming, in this connection, the Resolutions of previous Assemblies, the Council urges the Authorities in all Developing Countries to study the impressive benefits which have resulted from agricultural training programmes for the blind in Africa and Asia, and to introduce or expand such programmes together with accompanying systems of rural resettlement.

Resolution 7.

Legislation

Welcoming the already widespread adoption by the Governments of many countries of legislation protecting the rights of the blind and regretting that such legislative protection is not universal.

The Assembly Recommends:

That in countries where protective legislation does not at present exist Parliaments be urged to introduce legislation covering the following minimum requirements:—

(*a*) A quota system to protect blind people in employment.

(*b*) Free education, rehabilitation and vocational training for all blind persons capable of benefiting from it.

(*c*) A Compensating allowance for blind adults to offset the expenses incurred by their disability and the need for paid assistance in many aspects of life.

(*d*) A subsistence allowance to enable blind people, who are without income and who are incapable of work because of their age or infirmity, to lead a decent life.

Resolution 8.

Representation

Welcoming the growing feeling of solidarity amongst the blind of all Nations and amongst National and International Organisations concerned with blindness, and wishing to express the common purpose which generates and inspires all such effort, *The Assembly Agrees:*

1. That the Council re-affirms the principle laid down at the 1964 Assembly that "where in any country there exists a substantial group of blind persons organised into Associations and where there are blind persons occupying leading positions in Agencies for the blind, adequate provision should be made for their representation in the National Delegation."
2. That it is the duty of the Officers and Executive Committee to do everything practicable to ensure that this principle is observed in the spirit and in the letter.
3. That the Council recognises the essential role of responsible Organisations of blind persons in the history and development of work for the blind and will do everything in its power to ensure that they are accorded the representation to which they are entitled in this field of work which depends for its effectiveness on partnership between Organisations of and for the blind, and directs the Officers and Executive Committee to offer the maximum resistance, within the Constitution, to discriminatory practices by either party.

Resolution 9.

Acknowledgement:

The Assembly has already expressed but wishes most gratefully to record its cordial thanks to the President, Prime Minister, Government and people of India for the privilege of having our meetings in this great and hospitable land;

To the President, Council, Officers and Staff of the National Association for the Blind of India which, by the manner in which it has organised this Assembly, has added even further to the high esteem in which it is held in work for the blind throughout the World;

To the President and Members of the Blind Relief Association of New Delhi for their great hospitality, and for the effectiveness of all the arrangements they have made on our behalf;

To the host of voluntary helpers from the School of Social Work and other Institutions; and most specially to the Secretariat of the World Council and all their collaborators and to the Preparatory and Reception Committees;

To them and to all the Council's friends in India, the Assembly records true thanks for all that has been done to ensure the success of a fortnight which will leave its mark in the history of work for the blind and will long live in the memory of all who participated in it.

Mr Zimin then Proposed, Seconded by Dr M. R. Barnett, the Adoption of the following Supplementary Resolution, which was AGREED unanimously:—

Supplementary Resolution

The Representatives of the Unions and Associations of the Blind and for the Blind, Research Institutions and other National Organisations of the Council's 54 Member Countries dealing with the problems of the blind, have gathered in Delhi at the Fourth General Assembly of the Council to discuss the problems of further improvement of welfare of the blind.

At present there are at least fifteen million blind persons in the World.

Enormous numbers of people become blind as the result of War.

Mankind faces a multitude of problems, yet it is the problem of peace which is one of the most important.

The present level of science and technology provides objective conditions for complete medical, social and vocational rehabilitation of the blind, but peace is essential for the fulfilment of this noble programme.

We appeal to the United Nations, to the Governments of all States, to all International Organisations and progressive people of the World to do their best to prevent wars.

REPORT OF THE FINANCE COMMITTEE ON W.C.W.B. BUDGET FOR THE PERIOD 1969-1974

Mr J. C. Colligan, Chairman of the Finance Committee, reminded the Assembly that the report for the past five years had already been adopted, together with important decisions, e.g. the appointment of a paid Secretary-General and provision for International Members. The present report would, therefore, deal with the general budget for the next Quinquennium (i.e., 1st January 1970 to 31st December, 1974). At the 16th October, 1969, the Council's financial position was as follows:—

Income per annum:

	$	
Membership Fees		
54 Countries—164 Delegates	16,400	
Associate Members—48 at $50 ..	2,400	
International Members—2 at $200 ..	400	
Income from Investments (about) ..	1,000	
TOTAL: ..	20,200	
TOTAL FOR 5 YEARS: ..		$ 101,000

Expenditure:

	$
Known or probable—	
Secretary-General and Staff (for 5 years) ..	50,000
1974 General Assembly ..	10,000
ICEBY and Standing Committees (for 5 years) ..	17,000
Executive Committee Meeting	25,000
TOTAL: ..	102,000

These figures show a deficit of $1,000 for the five year period.

It was not reasonable to assume that the General Assembly or Executive Committee would cost less than in the present Quinquennium. Inflation, possible reduction of Membership Fees from small National Delegations, and probable increases in travel costs, all pointed to the need for increased Membership from National and Associate Members, and for additional income by contributions and donations from Charitable Trusts and Foundations, and through the functions of the new Secretary-General. It seemed best to proceed by way of an act of faith, and by our combined efforts to endeavour to secure new Membership, and additional donations and to put the World Council on a much surer financial basis than it was at the moment. The Finance Committee were budgeting for a deficit of $1,000, but hoped that it would not be necessary to draw on capital reserves, which stood at the very slender figure of $18,000.

Adoption of the Report was moved by Mr Colligan, seconded by Captain Desai, and AGREED unanimously.

ELECTION OF HONORARY LIFE MEMBERS

Don Ignatio Satrustegui, Chairman of the Nominations Committee, submitted to the Assembly, at the request of his Committee, a proposal which he felt sure would be very warmly received, namely that Mr Eric T. Boulter, to whom they were all so deeply indebted, be appointed an Honorary Life Member of the Council.

This Proposal was seconded by Captain Desai, and AGREED with acclamation.

The Secretary-General then presented a proposal, based on correspondence with National Delegations, that the following should also be Elected to Honorary Life Membership of the Council:—

Monsieur Henri Amblard, (*France*)
Dr Wlodzimierz Dolanski, (*Poland*)
Mr Hans C. Seierup, (*Denmark*)
Dr Carl Strehl, (*German Federal Republic*).

The Adoption of this Proposal was Moved by Monsieur Nicolle, Seconded by Dr Geissler and AGREED unanimously.

The President then reported that he had been approached by many Delegations with a request that a further name be submitted to the Assembly, and this he did with the greatest pleasure, and Proposed that Mr John E. Jarvis should be elected to Honorary Life Membership.

This Proposal was seconded by Mr J. C. Colligan, and AGREED unanimously.

BUSINESS SESSION 4

Friday morning,
October 17, 1969

REPORT OF THE NOMINATIONS COMMITTEE

Don Ignacio Satrustegui, Chairman of the Nominations Committee, proposed the following Nominations, to which the Council AGREED unanimously :—

(a) MEMBERS OF THE EXECUTIVE COMMITTEE NOMINATED BY THEIR RESPECTIVE REGIONS :

Europe
General A. Ammannato
Mr J. C. Colligan
Dr Horst Geissler
Mr C. Hedkvist
Professor O. Marinkov
Monsieur Andre Nicolle
Mr Boris Zimin

North And Central America
Dr M. R. Barnett
Mr H. H. Hanson
Mr A. N. Magill
Judge Reese H. Robrahn
Mrs M. de Stahl

East And South East Asia
Captain H. J. M. Desai
Mr H. Iwahashi
Miss W. Ng
Mrs M. Tiruchelvam
Begum M. H. Tyabji

South America
Mrs Dorina de Gouvea Nowill
Mr H. Pradilla-Cobos

Middle East
Mr A. M. El-Ghanim
Dr N. Khazaeli

Oceania
Mr F. Turley

Africa
Dr W. Cohen
Dr J. W. Cookey-Gam
Mr M. Rajhi

(*b*) MEMBERS OF THE EXECUTIVE COMMITTEE NOMINATED BY INTERNATIONAL MEMBERS OF THE COUNCIL :

Mr E. T. Boulter, American Foundation for Overseas Blind, Inc.
Mr J. F. Wilson, Royal Commonwealth Society for the Blind.

(c) MEMBERS "AT LARGE" ON THE EXECUTIVE COMMITTEE

Mr R. Alagiyawanna
Don Iganacio Satrustegui
Dr R. Vyas

(*d*) CHAIRMAN OF CONSULTATIVE COMMITTEE

Mr Tore Gissler, International Council of Educators of Blind Youth.

(*e*) OFFICERS OF THE COUNCIL

President: Mr Charles Hedkvist
Vice-Presidents: Dr M. Robert Barnett
Dr J. W. Cookey-Gam
Mr Hideyuki Iwahashi
Monsieur A. Nicolle
Mr B. Zimin

Treasurer: Mr J. C. Colligan

Mr Boulter announced that the Royal National Institute for the Blind had kindly agreed to allow Mr J. E. Jarvis to continue to act as Secretary-General until the appointment of his successor.

SPEECH OF
THE RETIRING PRESIDENT MR ERIC T. BOULTER

When one comes to the end of a period of service to an organization that is as great as this, one's mind is full of very many things, particularly the recollection of people. If it has been possible for me in my work with the blind to be of any service at all it doubtless derives from the fact that I had a very unique opportunity during my early years in the profession to serve under the tutelage of a group of very great men. My first boss in work for the blind as most of you know I think was Mr W. McG. Eagar, the renowned Secretary-General of the Royal National Institute for the Blind in the United Kingdom. I then had the privilege of serving under Dr Robert B. Irwin of the American Foundation for Overseas Blind, and under George Raverat in Paris with that same organization. Since the World Council for the Welfare of the Blind was created, for many years Colonel E. A. Baker and I served as a team with he as President and myself as Secretary General.. Every day that I spent with Eddie Baker, as it had been with the others, every conversation that we had, every letter that we exchanged helped me to understand more about this work, this profession, that is so dear to all of us. As a result of the leadership and the guidance that they gave to me, it was possible for me to accept the Presidency when you called me to do so five years ago. I know how anxious Charles Hedkvist feels now because I experienced it five years ago. At that time I felt, "how can I possibly guide the affairs of this great organization—surely it's influence will decline while I am the President." Well, this Council has shown great resilience. If it can last five years under my Presidency without disintegrating then I am confident that Charles has nothing to fear. These five years have been a wonderful experience for me. I have been supported by a magnificent group of officers ; John Jarvis, that great Secretary-General, Henri Amblard the Treasurer, whom we all love for his constant devotion and dedication to duty, Donna Dorina Nowill who is such a great influence on the progress of our work in South America and Hideyuki Iwahashi. Our Hon. Life Member, Kingsley Dassanaike, yesterday evening mentioned that he had been known as the "Wise Man of the East"—I always think of Hideyuki Iwahashi as the "Nippon Dynamo." He is constantly on the go with ideas and activities in order to make work for the blind in this part of the world more effective, and it's a great delight to me that he has been re-elected to office. Supported by such wonderful people as these and the three other Vice-Presidents, Paolo Bentivoglio, Carl Strehl and Stevan Uzelac, whom it was unfortunately my experience to lose from office, by death or retirement, during the five year period—it has been a wonderful and a memorable experience for me to serve as your President. Thank you very much indeed for the great honour and confidence that you extended to me five years ago, and for the untold kindnesses that have been extended to me throughout my term of office. Now the Council's affairs have been turned over to a new and magnificent state of officers.

One of the things that worries an individual who is going out of office is will the organization be passed on to the right hands? Well, in this case there can be no question of that; Charles Hedkvist is a great leader, and it is with real pride and satisfaction that I welcome him to the seat of the President of the World Council for the Welfare of the Blind. I know that each one of you would extend to him the same loyalty and diligent hard work that each of you has displayed during my term of office.

This Council of ours is a very precious thing, and each of us who is associated with it must cherish it and guide it well, and be prepared to work long hours, long days, that its work shall go forward. I believe that during this Assembly there has been an even greater spirit of fellowship and partnership than has ever been displayed before, and this augurs well for the continued growth of this organization. In complete confidence in their ability to continue to guide it forward in the way that it has always gone, it is now my pleasure to turn over the Council to its new President, Charles Hedkvist, and the other officers who will support him.

SPEECH OF THE NEWLY INSTALLED PRESIDENT MR CHARLES HEDKVIST

Mr Boulter, Ladies and Gentlemen, dear friends:

I feel inclined to refer to the resolution on education adopted yesterday. At school no-one taught me how to behave in a situation like this. Well, you realise no doubt that it is with mingled feelings that I sit here to-day. I naturally feel greatly honoured by the confidence you have shown me, but at the same time I feel greatly moved, humble, and even a little frightened. To be elected President of the World Council for the Welfare of the Blind implies the highest honour anybody in our sphere of work can be paid, but it also implies confidence and heavy responsibilities. The task is made no easier for the man who is to succeed a personality like Eric Boulter. Thanks to his energy, his long experience of national and international work, his comprehension of the problems of the blind, and his capacity for uniting differing opinions into a contribution towards the common aim, he has turned our World Council into an efficient and respected instrument for the work for the blind in the whole world. We are deeply grateful for all this; for his successor it means that he has a good foundation on which to try and go on building. But it also means that people both inside and outside our World Council have become accustomed to make great demands on the administration of their organisation, and, I am afraid, on the charm of its President as well. The situation is made no easier by the circumstance that two more of the mainstays of the World Council are leaving at the same time: John Jarvis, the Secretary-General, and Henri Amblard, our Treasurer. Thanks to his deep insight and his willingness to help whenever required, John Jarvis has become much more than a skilled and experienced Secretary General. He is something of a symbol for international contacts both inside and outside our organisation. And Henri Amblard has meant confidence and security during the most difficult period of any organisation, the first stage of its existence.

My dear friends Eric, Henri and John—you are retiring—but if you think that means that you will be free from the World Council for the Welfare of the Blind from tomorrow, I am afraid you will find that it is just another illusion. We who are taking over will be in desperate need of your advice and assistance; so, therefore, today I say only thank you for all you have done hitherto. I started by saying that I feel a little afraid having to take over the job from Eric Boulter, but there are encouraging factors as well; one such factor is your decision to employ a full time Secretary-General, thus giving the administration of the World Council better resources. Another factor is your election of such a skilled administrator as Mr John Colligan as our Treasurer, and the election of the Vice-Presidents and the composition of the new Executive Committee is also a guarantee for further successful work.

Dear friends, the object of all blind welfare is to overcome blindness as an obstacle to economic, social and cultural development. In many countries the results achieved in their work for the blind during the recent years have been of a kind one hardly dreamt of before. But the world has been changing for sighted people as well, and I do not believe that there is any country where the difference between the standard of the sighted and the standard of the blind has been vitally reduced. The reasons for this you will find in the basic problem of blindness. More than 99 per cent of all human beings can see. It is thus natural that functions developed in society for serving people should be formed so that the capacity to see is effectively utilised, otherwise society would be irrational. This is something we just have to accept. It is also natural that a rapidly developing society should, in the first place, shape its functions according to the needs and qualifications of the majority. In such a society the gap between the large sighted majority and the small blind minority may quickly grow. One of our most important tasks is to see to it that the delay does not become too long before the problems of the blind are taken in hand by society. This is especially important in the rapidly developing new countries. When discussing what resources we, in the industrialised countries, have set aside for work in the developing countries, we should bear in mind, I think, that if we do not pay attention to those problems today, we must be prepared to devote to them later on in the shape of increasing difficulties. It is also natural that those who deal with the problems of the majority are not experts with regard to the problems of the minorities. Here lies our second important task; that is to show how the problems may be solved. But do we really know how the problems may be solved? Each country taken separately may not have knowledge covering the whole field, but jointly we posses enormous funds of expert knowledge. The central task for our international co-operation must be to make all this knowledge available to all countries. In this connection no one of us is entirely a giver nor entirely a taker, which has been clearly demonstrated in the course of this conference. Prevention of blindness is the best blind welfare. Therefore prevention must be given high priority in our work. Prevention is a great problem in the developing countries, but even in the so-called advanced countries one has noticed an alarming increase of blindness because science has been unable to overcome problems created by science itself. Another field for international co-operation is the utilisation of modern technology. I am convinced that if we have sufficient resources we should be able, in a few decades, to revolutionise conditions for the blind by means of technology. Imagine what it would mean if for such an object we might dispose of one per cent, say, of the cost of one rocket to the moon. I could, of course, mention many other fields for fruitful international co-operation, but allow myself only to refer to the resolutions adopted yesterday.

Dear friends, allow me, at the start of my work as your President, to make a personal declaration on a subject that has caused more misunderstanding than we can really afford. We do not live only in an age of science; we live in an age of emancipation as well. Our ladies are emancipated whether we men like it or not. Student riots in many countries are manifestations of the same trend, and so are national independence movements in all parts of the world. Today, protection is old-fashioned. Today, we talk of solidarity. We who are blind react to the trends of the age exactly as the sighted. We do not want to be protected. We want to take full responsibility in the shaping of our fate. But no individual and no group can shape its own fate without co-operation with other individuals and other groups. It must be a source of enormous satisfaction for our sighted friends that their great self-sacrificing work has brought us to the point where we are capable and willing to take full responsibility; but we need the support and co-operation of our sighted friends in the coming years as well if we shall have a chance to reach real emancipation. I have in my own country experienced what results can be achieved by loyal co-operation and mutual respect on the same level between organisations of the blind and organisations for the blind, and may I wish you something, in all the countries of the world—I will wish you to have a chance to have the same experience.

The biggest problem in our international work is our budget. You have heard that before. For our international work for between fifteen and twenty million blind people, we should require a budget corresponding say to the cost of one of the fighter planes probably shot down today somewhere in the world. We have only a small percentage of such a budget, but if we augment our financial resources with sufficient resources of imagination, solidarity and generosity, I am convinced that you can take an optimistic view of the years to come, whether you have got a good President or a bad one. But, in my work I have a desperate need of your understanding, your loyal support and your co-operation. Thank you indeed.

Mr Boulter:

Thank you very much indeed Charles. That was a most inspiring address and, on behalf of all of us I am sure that you can count on the unstinted support, co-operation and loyalty of every member of the World Council for the Welfare of the Blind as you approach the task which, from experience, I can say will at times be difficult, but which will always be challenging and satisfying.

VALEDICTORY SESSION

Friday morning, October 17, 1969

Chairman: **Mr Charles Hedkvist,** *President, World Council for the Welfare of the Blind*

Speech By **Dr (Mrs) Durgabai Deshmukh**
President, Blind Relief Association, New Delhi

Mr Hedkvist: We are coming to the close of this wonderful assembly, but before we close the assembly, and before we depart, I have the very great pleasure of calling upon three of our friends in India to have the floor, and the first one I am calling is Mrs Deshmukh.

Mrs Deshmukh: Mr President, Mr Jarvis, Mrs Captain and Dr Guha:

Since this is the first opportunity I have had to express my views, I welcomed this chance of accepting the request of the President to give in a nutshell what has happened during the sessions for the past ten days. This will enable Dr Phulrenu Guha, who is attending this session, but was not able to attend the previous sessions as she was away on very important work touring the country, to hear how these deliberations have gone on during the past ten days. I have no doubt that she has acquainted herself fully with the papers that have been presented at the sessions, but I would like to sum up the deliberations under several categories; as far as I can see these categories are first: those papers which dealt with our main theme "The Blind in an Age of Science;" the second one is training and employment, and the third one is the radio, press, TV and mass communication media; the fourth is research and evaluation; the fifth is the prevention and cure of blindness, and the restoration of sight; the sixth is social welfare, social conscience, and social recreation; there are many others but within the limited time at my disposal I thought that I should tell our Honourable Minister that these are the main topics on which discussions have taken place, as well as the comprehensive resolutions that were passed yesterday, which have been widely reported in the press this morning. One other important topic which was covered by the discussions was international co-operation, and particularly the assistance coming from the United Nations and all the organisations within the United Nations Family: WHO, UNESCO, UNICEF, and other agencies, and other foreign foundations, independent or otherwise. Now, Madam, that you are going to give us your address which will bring cheer, courage and hope, particularly for this country, we know that what you will say will pave the way for the implementation of some of these recommendations, thus giving a lead to other countries; therefore it is your responsibility to see that steps are taken by your Department for the implementation of some of these recommendations immediately, because we have a very tremendous responsibility as the Conference is being held in this country. We have hosted this Conference, therefore every country will look to you as the one in charge of this Department of Social Welfare, and as the Minister directly dealing with many of these matters, give leadership in the implementation of these recommendations. Now taking for instance legislation: the road is open for its introduction. However, legislation means nothing if it is devoid of the desire for implementation on the part of the Government. Legislation is not the end; it is only a means to attain an end. It is necessary therefore to prepare the ground before the legislation is introduced, otherwise as we have seen in the case of social welfare laws, there may be much legislation in the statute book, but little implementation. There is, we know, a great need for legislation, but there is a greater need for implementation, if this is not done, the legislation falls flat. The need for social legislation is firmly based, but it takes time; you have to prepare the body of the people to accept it. For legislation to succeed it requires on the part of the Government a determination of allocations, and the organisation of measures for implementation. The administration dealing with this work is part of the general administration, and is not suitable for these needs. There is need for a social administrator, an administrator who will have to be orientated with regard to social needs; he must have a social conscience first, which is unfortunately lacking. You cannot afford to deal with social legislation and its implementation in a casual way and we cannot wait.

Now the constitution of India lays down firmly the directive principles of social policy, which provide for social equality, economic equality, social justice and economic justice. These are fundamental rights in the Constitution and for that reason it is sometimes argued that legislation for special groups cannot be introduced, however, there is a provision in the Constitution (as a member of the constituent assembly I saw to that) which enables the enactment of special legislation in the inrest of weaker sections of the community and handicapped groups. Legislation will in fact make your hands stronger to introduce measures for the welfare of the handicapped, but even before the legislation is put on the statute book, you have to devise the machinery for administration, and fix an allocation of funds. You cannot leave the responsibility for the welfare of the handicapped only to voluntary organisations; so far the work for the blind, the deaf and the dumb, and other groups has fallen to the lot of voluntary organisations on a footing of charity, philanthropy, and pity, which we want to remove from our destiny. There is no commitment on the part of government anywhere. The Government must come forward with a firm commitment in the form of legislation which will be the beginning—and the rest will follow.

I would also suggest with regard to programmes of the United Nations, etc. (I have attended many conferences and participated in United Nations' programmes for children and so on) that those concerned with the welfare of the blind, as for any other group, must form a part and parcel of the total development plans of the country. They cannot be outside the national plans. If they are outside, if they are not built-in plans in the social and economic development of the country's plans, they have every chance of getting lost. I believe that welfare plans for the blind should form a part and parcel of government policy, then only will they have a chance of getting implemented.

With regard to training and employment: we have nine special employment exchanges for the handicapped in this country, but how much work have they done? May be their work is impressive with regard to other sections of the handicapped, but not for the blind. Very little has been done. Therefore with regard to this very important field of training and employment, the Government will have to see to it that there are pressure groups. As a social worker I have always advocated the need for pressure groups in the field of welfare and particularly for the welfare of the handicapped. Who are their mouth pieces? Their voice is not heard. For industry, and labour, there are pressure groups; and for scheduled castes and scheduled tribes, there are pressure groups, therefore they are able to get what they want; crores and crores of rupees have been provided because they are politically important. The constitution provided safeguards for the scheduled groups for ten years, which has been extended from time to time. But who has thought of providing safeguards for the welfare of the handicapped? We social workers will have to form pressure groups. We are not politically important, and therefore we are neglected. I have decided myself to pressurise the Government, but not by way of hunger strike or Dharna, but instead by taking up the cause of the blind on every platform. Our cause is genuine, and I am sure the Government will yield to our pressure.

The next thing I want to mention is the importance of research and evaluation. Research not only with regard to the question of the costs and benefits of providing services for the blind, but also with regard to the prevention and cure of blindness and the restoration of sight. As a Director of the Council for Applied Social Research and Economic Planning I have undertaken several research projects, both micro—and macro—subjects, and have no doubts about the value of research. This language of costs and benefits has only been applied to industrial and economic projects, fertilizers, automobiles, etc., but now it is time that costs and benefits techniques are applied to services for the blind. Take for example the employment of the blind; it is no use employing the blind on the basis of charity and pity. In fact a blind man can be productive and should be placed on his own merit. We have already completed a research project on cost and benefit with regard to programmes for the Council for Applied Social Research and Economic Planning.

I will not take much more of your time except to say something about the radio, TV, and the press. It is a struggle for us, Madam, to get publicity for our cause. You yourself know that anything said about social welfare, whether it is of a child or of destitute women, or a deserted person or the blind, is hardly ever reported. The press, heavily controlled by the moneyed group (I am courageous enough to say this) are not bothered about the weaker section. They always say that economic development must come first, and social welfare may take care of itself if there are any surpluses which are generated by economic development, which is never the case. All countries have now realised that social change must take place, the individual must develop, the individual must be made a productive factor and contribute to the general good, and this has now been realised, but still we have got to educate the press very much, and this is the first time without any fear or favour I can say that this is the only Conference in the name of welfare in India that has been attended to and respected by the entire press in this country. Most probably this is due to the magnetic personality of the leaders who have come to this country. The cause has appealed to every single paper, and has received wide publicity, not only in the English language press, but in the regional press throughout the breadth and depth of India. Once again, I repeat that we must form a pressure group for the welfare of the blind. The group must be active and alert, and we must take every platform—not to plead for charity—not to plead for pity—not to plead for philanthrophy—but to demand the right for services on merit, and the right to contribute to the good of our nation. It is essential that these plans for the handicapped are not left out of the main arena.

The Fourth Plan is coming out in India, and it is now before Parliament. Plans for the handicapped must form a part and parcel of the total planning of the country. If this is not done then I am sure that the voluntary organisations, even if they have to beg, borrow, and steal will continue their efforts on behalf of the handicapped. This is my appeal to you now as I leave the floor to the President. Thank you.

VALEDICTORY ADDRESS

By **Dr (Mrs) Phulrenu Guha,** *Union Minister of State for Social Welfare, Government of India, New Delhi.*

Mr. Hedkvist: I am sure you agree with me that Mrs Deshmukh is worth more—or more pressing—than many pressure groups ! I told you before that I have the privilege of giving the floor to three friends. With the background of the fascinating country of India, and their overwhelming friendliness and kindness we have all met here, we are of course inclined to regard all people in India as our friends, and this is the reason why I have called the Union Minister of State for Social Welfare, Dr Mrs Phulrenu Guha, as one of the three friends whom we are to listen to today. Mrs Guha has promised to give us a valedictory address, and I give the floor to her . . . .

Mrs Guha: Respected Mr President, Mrs Captain, Mrs Deshmukh, colleagues and friends : I am privileged to address this galaxy of experts who have travelled long distances to come to this city to discuss in depth many aspects of the education, training, and rehabilitation of the blind. On account of other pressing pre-occupations, it was unfortunately not possible for me to be with you during your deliberations. I need hardly assure you, however, that I have made every possible effort to keep in touch with your proceedings. I have also read with great interest some of the outstanding papers read at this Assembly. Science and technology have profoundly influenced the life of each one of us. In fact, but for the spectacular advance in aviation in the recent past, it might not have been possible for many of you to be here today. Profound indeed has been the influence of science and technology on the life of the blind. The invention of braille in 1829 opened new horizons for the sightless. These horizons are steadily widening with new developments particularly in the field of electronics. The recorded tape has given a new direction to the education of the blind. Similarly the invention of the computer, combined with the automation of industry, has opened up new avenues of employment for the blind. Heart-warming is the statement of the Director-General of the Royal National Institute for the Blind, London, to the effect that over 10,000 blind persons in the United Kingdom are engaged in professional and administrative work. Many of them have taken up computer programming, and other occupations regarding scientific training, a fact of profound significance for us in this country where placement of the blind is the most formidable problem.

Friends, we live in an age of rapid and radical change.

Workers for the blind have, therefore, to be prepared to discard old concepts and methods of working and adopt new ones in the light of the development of science and technology. I am glad therefore that the major theme of this assembly was "The Blind in an Age of Science." It is gratifying to know that you have discussed in depth the influence of science and technology on every aspect of the life of the blind child and adult. Those of you who had participated in this memorable assembly will no doubt be better prepared to meet the challenge of the future. You will also have the responsibility of assisting your colleagues in many countries to take a fresh look at the rehabilitation of the blind in the light of the rapid changes that are taking place.

I think the address of the Chairman of your Programme Committee was extremely pertinent. As he pointed out, developments in every branch of science have a bearing on the rehabilitation of the blind, including research leading to the voyage to the moon. Even this apparently unrelated field of endeavour is likely to influence the life of the sightless. I know that in your technical sessions you have discussed a number of possible aids which will further reduce the burden of blindness. A posibility which until a few years ago would have appeared a dream in wonderland is electronic vision for the blind. I understand that considerable research is at present under way, particularly in the United States, designed to develop an instrument which would produce visual imagery without the intervention of the physical eye.

Should this instrument develop, despite its many limitations, it will give an entirely new dimension to the problems of the blind. But, friends, may I at this stage strike a note of caution ? We appear likely to be carried away by the fascinating devices which appear on the threshold. It is important to remember, however, that the development of new appliances also gives rise to new problems. To quote an instance : changes in production techniques make fresh demands on the blind child to develop new skills. Similarly the changes in the way of reading also make fresh and rigorous demands on the sense training. It is also necessary to realise that in the changing context of rapid technological change, the social worker has a vital role to play in enabling the blind to adjust to the new situation. The rapid changes in today's world have increased the challenge of the role that social service must accomplish. If we are to accept this challenge we must not only relate the role of the social worker to principles and techniques of social work, but adopt new concepts which we must put into practice, according to the particular needs of the people we serve.

Many are the challenges that the workers for the blind and the blind themselves have to face in years to come. The most formidable challenge for the worker in the field is to keep pace with the fruits of research that are continually pouring in. He must review his tools and techniques from time to time, in order to meet effectively the newly emerging needs of the blind child and adult. The most important challenge for the blind child is to prepare himself to cope with the information explosion taking place in the world. This is necessary if he is to meet effectively the demands of education and of his profession. We are all inclined to imagine that developments in electronics will bridge the gap between the ability of the blind and the sighted to acquire and assimilate information. A sobering thought is, however, that the gulf is widening, instead of narrowing down, because of new means of gathering information open to the sighted child. The educator of the blind is therefore faced with an unprecedented challenge. He must marshal all his resources in order to develop new techniques of helping the blind to keep pace with the demand of the educational and professional requirements.

The gulf between the developed and developing countries in the provision of services for the blind is so great at the present time that many of the new approaches discussed at this assembly appeared to workers in developing countries like dim clouds on the horizon. The meeting of this assembly in New Delhi is an indication of growing international co-operation in this field. I do hope however that the intention expressed in the assembly will crystallise the international action through which the blind in every country will profit. I would strongly urge on this Assembly therefore to give deep thought to the possibility of concrete international action in favour of the blind living in areas where services either do not exist or are at present in an embryonic stage. Only then will the work of this Assembly be of practical benefit to the sightless throughout the globe.

On our part, I am glad to add the Government of India for the last few years have taken a very keen interest in the education, training and rehabilitation of the blind. It may not be according to the need of the country at the moment. Many of you will be visiting the National Centre for the Blind at Dehra Dun, which is a token of the interest of the central government in this problem. We have also awarded scholarships to over a thousand students in the last decade to receive greater education and/or professional training in ordinary institutions. We are launching a small scheme to place blind children in ordinary schools side by side with their sighted counterparts. Nine special employment exchanges for the physically handicapped have started to assist physically handicapped persons, including the blind, in securing remunerative work; they have already helped about 800 blind employment seekers. I agree with Mrs Deshmukh that it is not much, and much more is to be done.

The Fourth Plan gives high priority to the development of services for the handicapped, including the blind. I have no doubt that the recommendations of this Assembly will be of great value to the Government of every country. They will be to us like a beacon in the formulation of the future course and the direction of the national action for the rehabilitation of the blind. Since research is being undertaken in many countries, co-ordination with a view to avoiding duplication of efforts in the field has already come into being. I trust that this organisation will play a leading role in co-ordinating and stimulating research as well as in widening and disseminating the knowledge and experience gained from international action. The exhibition organised on the occasion of this Assembly is symbolic of the progress being made in many parts of the world. I am glad to know that nearly twenty countries have participated in this exhibition. Such a living demonstration of the possibility of making the blind child and adult a social and economic asset will undoubtedly appeal to the creative imagination of every worker interested in their well-being. A new typewriter developed in Japan writing simultaneously in braille and print has attracted wide attention. I am deelpy grateful to the Japanese delegation for generously donating this typewriter to the National Centre for the Blind. I am also deeply grateful to the Director-General of the Royal National Institute for the Blind, London, who has so generously decided to donate his entire collection of exhibits to the Government of India. Since one of the functions of the Indian National Centre for the Blind is to develop new aids I have no doubt that these gifts will be invaluable in its research to find new ways of helping the blind to help themselves.

In conclusion, let me say once again how happy we have been to have had the rare privilege of acting as hosts to the World Council for the Welfare of the Blind—I know that the local Reception Committee has spared no efforts to make you feel at home in this city of Delhi. I know that as you return to your countries and to your chosen field of endeavour you will carry with you pleasant memories of new friendships made and of professional links established. The expert discussions will have served to reinforce your faith and ambition in securing the welfare of the blind. A number of delegates have described the exciting scientific and technical innovations that are being developed across the world. Perhaps very soon the long-cherished breakthrough will be achieved. However I still believe that the ultimate challenge is to the spirit of man—his sense of courage, his indomitable will to overcome the many physical obstacles that fate may choose to place in the way. It is with this note of challenge to endeavour that I wish to close my address. Thank you.

Speech By MRS QUEENIE H. C. CAPTAIN

President, National Association for the Blind, India.

Mr Hedkvist: We have at this conference been very strongly impressed by the interest and positive goodwill for our work shown by the official authorities at the highest level. This is a guarantee for future work for the blind in India, and at the same time it is a source of enormous satisfaction for us to have experienced. Will you please, Dr Guha, convey to the Government of India, to the authorities, and to the Indian people, our deepest gratitude and our admiration for your wonderful country. I told you that we should have the pleasure of hearing three friends today. The third one is Mrs Captain.

Mrs Captain: Mr. President, Madam Minister for Social Welfare, friends:

First, on behalf of the National Association for the Blind, may I congratulate the newly appointed officers and the executive of the World Council for the Welfare of the Blind. And I would at the same time thank most sincerely Mr Boulter and all the members who were previously on the Council, because we have gained so much from their help and friendship.

I do not intend to repeat anything that my friend, Mrs Durgabai Deshmukh, has said because she is a lawyer and a constitution-maker and a friend and co-worker of ours; I endorse all the sentiments expressed by her and I can promise you that our National Association for the Blind will now become a pressure group. We are deeply grateful and very honoured to have the Minister of State for Social Welfare with us, and I think she agreed when I said we would become a pressure group. She is entirely with us, and I would like to take this opportunity to thank our Government for the very great help we have received in recent years. There was a time when we wrote and wrote, and received only a post card or a brief line to say that the matter was receiving attention, but now we do get definite action on the part of the Department, and may I say how grateful we are to Mrs Guha, because it is mainly due to this lady's efforts in support of our work.

Along with the problem of the blind, in India, we also have other handicapped groups, and I hope when this legislation is implemented, there will be room for other handicapped persons also. Naturally we would like the blind, because of their enormous numbers, to receive priority, but we would like to help other members of the handicapped group. From small beginnings we have now, I think, reached the stage that when we visit other countries and visit their institutions for the blind and other handicapped persons, we feel we need not be ashamed of the efforts we have made in the last seventeen years. But we do realise that we have very much more to learn and to implement, and with the happy spirit that has prevailed in this World Council of which we are respected and honoured members, we feel that we can go forward with more faith and more confidence. As the host country may I say how happy we have been to have you all here : the spirit of goodwill and friendship and understanding is something that I have never experienced at any other international or world conference. I have had the privilege of attending other conferences in India and abroad but this I think has been the happiest one, and it has meant hard work, but it has been worthwhile.

We thank you for coming from all the corners of the earth, and we hope that you will carry away with you nothing but goodwill from this country, and very happy memories of your visit with us. May the work throughout the world among the blind prosper and grow from strength to strength. With these new devices now available and being developed with the aid of our scientists, we hope to make further progress; they will show us the way, as you will show us the way, and help us.

Thank you very much indeed for coming; we have been so happy to have you here ; it will be a long time before there will be another world conference in India, but I hope that you will all come.

REMARKS BY MR B. S. RAMDAS

Deputy Secretary, Department of Social Welfare,
Government of India, New Delhi.

Mr Jarvis: Mr President, may I ask you to be kind enough to recognise for a few moments, Mr. Ramdas, Deputy Secretary in the Union Department of Social Welfare, who would like to say a few words.

Mr Ramdas: Mr President, Mrs Queenie Captain, Mrs Deshmukh and friends:

My Madam Minister has already acknowledged gratefully the exhibits that have been made available to us and donated to the Government of India. I would like to take this opportunity to say how pleased we are that the Director-General of the Royal National Institute for the Blind, London, has very kindly donated all his exhibits in New Delhi to the Government of India. The Japanese delegation has very generously donated to the Government of India their typewriter which writes simultaneously in braille and print, and several other items now on display. May I on behalf of the Government of India express my very warm appreciation for this token of friendship and brotherhood from the United Kingdom and Japan. I have no doubt these gifts will be of great value to the blind in India. Thank you very much.

CLOSING REMARKS

By **Mr Charles Hedkvist,** *President, World Council for the Welfare of the Blind*

Ladies and gentlemen, dear friends :

We are coming to the end of this very interesting and good conference. I have been at all the General Assemblies of the World Council for the Welfare of the Blind, including the Conference in Oxford that was before the establishment of this organisation; and I have been told that you should never make any comparisons, but may I say that this has been one of the best General Assemblies. I came from the North of Europe to this very distant country with very great expectations, and what did I find ? I did not find the country of the Jungle Book, but I found a country with enormous problems, but at the same time I found a country full of enthusiasm, and of realism and of decision to tackle problems and to solve them. And I found a country with very charming people. I should like to say thank you to everyone, but I have been told that in this country there are more than five hundred million people, and I have the very strong feeling that a lot of them have been my personal friends. So you would not expect me to name all of them. Some of them have been named before, but I must say thank you to every one of you. You have been so enormously charming ; you have shown such hospitality. When I leave this country I have a feeling that I will have made so many friends among the leading people in the work for the blind and among the volunteers here who have been so charming and friendly and always willing to help.

May I, on behalf of the audience, wish you all good luck for the future work for the blind. You really deserve it, and I am quite sure that if we can do anything to support that work we are willing to do so. Finally may I extend my very sincere thanks: Thank you all very much. We are now going to close the conference and I say to you "au revoir", "auf wiedersehen", or whatever it is in your various languages, in 1974, somewhere in the world. Thank you very much.

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